

Appendix table 3-1.

U.S. scientists and engineers, by S&E degree status and labor force status: 1997

S&E degree status	Total	Labor Force Status			Unem- ployed	Not in labor force
		Employed		Total		
		In S&E	In non-S&E			
Scientists and engineers, total	12,530,700	10,585,600	3,369,400	7,216,200	193,700	1,751,400
Educated in S&E	11,962,100	10,057,600	3,074,800	6,982,800	187,300	1,717,200
Highest degree is in S&E	9,269,200	7,704,000	2,840,800	4,863,200	150,500	1,414,700
Highest degree is in non-S&E	2,692,900	2,353,600	234,000	2,119,600	36,700	302,500
No S&E degree*	568,600	528,000	294,600	233,400	6,400	34,100

*The persons without S&E degrees or jobs in 1997 represent individuals who had S&E jobs in 1993, but had later moved to non-S&E jobs, became unemployed, or had moved out of the labor force.

NOTES: The term "Scientists and Engineers" (S&Es) includes all persons who have ever received a bachelor's degree or higher in a science or engineering (S&E) field, plus persons holding a non-S&E bachelor's or higher degree who were employed in a S&E occupation during either the 1993, 1995 or 1997 SESTAT surveys. Figures are rounded to nearest hundred. Details may not add to total because of rounding.

SOURCE: National Science Foundation, Division of Science Resources Studies (NSF/SRS), Scientists and Engineers Statistical Data System, 1997.

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Science and Engineering Indicators – 2000

Appendix table 3-2.

Educational attainment of employed U.S. scientists and engineers, by level and field of highest degree and broad occupation category: 1997

Field of highest degree	All occupations, total		Occupation					Non-S&E occupations
			Computer/ math scientists	Life/ related scientists	Physical/ related scientists	Social/ related scientists	Engineers	
	Number	Percent	Percent					
All degree levels, total^a								
All degree fields, total	10,585,600	100.0	9.8	3.0	2.7	3.3	13.0	68.2
S&E degree fields, total	7,704,000	100.0	10.5	3.6	3.5	3.7	15.5	63.1
Sciences, total	5,794,700	100.0	10.9	4.7	4.4	4.9	2.3	72.8
Computer/math sciences, total ...	1,003,300	100.0	45.4	0.2	0.4	0.2	3.1	50.7
Computer/information sciences ...	543,800	100.0	58.4	0.1	0.1	0.1	2.6	38.7
Mathematical sciences	459,500	100.0	29.9	0.3	0.8	0.4	3.8	64.8
Life/related sciences, total	1,204,700	100.0	2.3	19.5	3.1	0.4	1.8	72.9
Agricultural/food sciences	218,700	100.0	1.7	18.5	1.3	0.2	1.7	76.5
Biological sciences	889,100	100.0	2.2	20.4	3.1	0.4	1.3	72.5
Environmental life sciences	96,900	100.0	3.8	13.8	6.4	0.6	6.9	68.4
Physical/related sciences, total ...	619,200	100.0	7.1	3.1	33.8	0.3	9.7	46.0
Chemistry, except biochemistry ...	275,100	100.0	3.7	5.2	38.3	0.1	6.0	46.7
Earth science, geology and oceanography	146,900	100.0	4.9	1.0	41.6	0.2	6.1	46.2
Physics/astronomy	144,100	100.0	16.6	1.4	27.3	0.8	19.6	34.4
Other physical sciences	53,000	100.0	5.3	2.6	5.8	0.6	11.5	74.2
Social/related sciences, total	2,967,600	100.0	3.5	0.5	0.2	9.4	0.6	85.8
Economics	402,800	100.0	5.3	0.7	0.3	8.4	1.0	84.3
Political/related sciences	558,700	100.0	3.4	0.3	0.2	4.8	0.8	90.5
Psychology	1,112,800	100.0	3.2	0.6	S	15.5	0.6	80.1
Sociology/anthropology	558,600	100.0	2.1	0.4	0.1	6.1	0.3	90.9
Other social sciences	334,800	100.0	4.9	0.3	0.7	3.4	0.7	90.0
Engineering, total	1,909,200	100.0	9.4	0.2	0.8	0.1	55.7	33.8
Aerospace/related engineering	77,400	100.0	8.9	0.1	0.5	S	47.0	43.4
Chemical engineering	138,400	100.0	3.0	0.4	3.0	0.1	61.2	32.3
Civil/architectural engineering	322,300	100.0	2.0	S	0.3	0.1	61.7	35.8
Electrical/related engineering	582,100	100.0	19.4	0.1	0.3	0.1	52.5	27.6
Industrial engineering	105,400	100.0	10.7	S	S	0.3	36.7	52.2
Mechanical engineering	386,100	100.0	4.9	0.2	0.2	S	64.4	30.3
Other engineering	297,500	100.0	6.5	0.7	2.5	0.1	50.5	39.8
Non-S&E degrees, total	2,881,700	100.0	7.9	1.7	0.5	2.1	6.2	81.7
Business/management	703,100	100.0	16.4	0.9	0.5	1.5	11.6	69.1
Education	434,200	100.0	6.9	1.5	0.2	3.6	1.8	86.0
Health	589,900	100.0	0.7	3.8	0.8	0.8	0.5	93.4
Other non-S&E	1,154,500	100.0	6.8	1.1	0.4	2.5	7.5	81.7

See explanatory notes, if any, and SOURCE at end of table.

Appendix table 3-2.

Educational attainment of employed U.S. scientists and engineers, by level and field of highest degree and broad occupation category: 1997

Field of highest degree	All occupations, total		Occupation					Non-S&E occupations
			Computer/math scientists	Life/related scientists	Physical/related scientists	Social/related scientists	Engineers	
	Number	Percent	Percent					
Bachelor's, total								
All degree fields, total	6,193,700	100.0	10.9	2.0	2.1	1.1	14.8	69.1
S&E degree fields, total	5,683,700	100.0	9.7	2.0	2.2	1.2	14.7	70.3
Sciences, total	4,303,400	100.0	10.1	2.6	2.8	1.5	2.1	81.0
Computer/math sciences, total ...	721,600	100.0	41.5	0.2	0.4	0.1	2.5	55.3
Computer/information sciences ...	385,000	100.0	57.5	S	0.2	0.1	1.8	40.5
Mathematical sciences	336,600	100.0	23.3	0.3	0.8	0.2	3.1	72.2
Life/related sciences, total	884,500	100.0	2.3	10.4	2.7	0.2	1.9	82.3
Agricultural/food sciences	175,200	100.0	1.8	11.4	0.7	0.2	1.7	84.2
Biological sciences	634,500	100.0	2.3	10.2	3.1	0.2	1.5	82.6
Environmental life sciences	74,800	100.0	3.9	10.4	4.3	0.3	5.6	75.5
Physical/related sciences, total ...	381,900	100.0	7.4	2.2	23.3	0.3	10.6	56.2
Chemistry, except biochemistry ...	176,100	100.0	4.4	3.6	29.0	0.1	6.5	56.3
Earth science, geology and oceanography	96,300	100.0	5.4	0.5	29.6	0.2	7.3	56.9
Physics/astronomy	68,800	100.0	20.1	1.0	12.5	1.0	24.6	41.0
Other physical sciences	40,700	100.0	3.4	1.7	2.0	0.7	12.5	79.9
Social/related sciences, total	2,315,500	100.0	3.7	0.4	0.1	2.6	0.7	92.6
Economics	337,300	100.0	5.6	0.5	0.4	2.6	1.1	89.8
Political/related sciences	476,100	100.0	3.5	0.4	0.1	1.6	0.8	93.7
Psychology	750,000	100.0	3.6	0.4	0.1	3.7	0.5	91.7
Sociology/anthropology	496,300	100.0	2.2	0.4	0.1	2.4	0.4	94.6
Other social sciences	255,900	100.0	4.5	0.2	0.3	1.7	0.7	92.6
Engineering, total	1,380,300	100.0	8.4	0.1	0.6	0.1	53.9	36.9
Aerospace/related engineering	55,200	100.0	9.6	S	0.2	S	43.5	46.6
Chemical engineering	102,100	100.0	2.7	0.3	2.8	0.2	59.5	34.7
Civil/architectural engineering	243,800	100.0	1.8	S	0.1	S	60.5	37.5
Electrical/related engineering	413,200	100.0	18.2	S	0.3	0.2	50.8	30.4
Industrial engineering	79,300	100.0	7.4	S	S	0.3	33.4	58.9
Mechanical engineering	308,500	100.0	4.1	0.2	0.1	S	63.4	32.2
Other engineering	178,200	100.0	5.3	0.3	1.6	0.1	44.8	47.9
Non-S&E degrees, total	510,000	100.0	24.7	2.5	0.9	0.5	16.1	55.3
Business/management	161,200	100.0	35.7	2.9	0.2	0.4	7.7	53.1
Education	48,800	100.0	22.5	1.4	0.2	S	10.2	65.6
Health	59,700	100.0	3.2	4.2	4.2	S	2.5	85.8
Other non-S&E	240,400	100.0	23.2	2.1	0.7	0.6	26.2	47.1

See explanatory notes, if any, and SOURCE at end of table.

Appendix table 3-2.

Educational attainment of employed U.S. scientists and engineers, by level and field of highest degree and broad occupation category: 1997

Field of highest degree	All occupations, total		Occupation					Non-S&E occupations
			Computer/ math scientists	Life/ related scientists	Physical/ related scientists	Social/ related scientists	Engineers	
			Number	Percent	Percent			
Master's, total								
All degree fields, total	2,819,800	100.0	10.7	2.5	2.5	5.4	13.3	65.7
S&E degree fields, total	1,431,600	100.0	14.7	3.7	4.2	7.6	19.8	50.0
Sciences, total	1,001,000	100.0	15.5	5.2	5.5	10.8	3.0	60.0
Computer/math sciences, total ...	244,700	100.0	51.8	0.1	0.3	0.5	5.2	42.1
Computer/information sciences ...	148,800	100.0	59.7	0.1	0.1	0.2	4.4	35.6
Mathematical sciences	95,800	100.0	39.5	0.1	0.7	0.9	6.4	52.4
Life/related sciences, total	156,600	100.0	2.3	29.0	4.6	1.0	2.3	60.8
Agricultural/food sciences	26,700	100.0	1.9	34.8	3.7	S	2.2	57.3
Biological sciences	112,500	100.0	2.1	29.1	3.3	1.2	1.0	63.4
Environmental life sciences	17,400	100.0	4.0	19.5	14.4	1.1	10.9	50.0
Physical/related sciences, total ...	114,500	100.0	8.4	3.0	40.3	0.3	9.6	38.7
Chemistry, except biochemistry ...	36,500	100.0	2.5	6.0	44.9	S	6.8	39.7
Earth science, geology and oceanography	34,400	100.0	4.9	2.0	58.1	S	4.7	30.2
Physics/astronomy	33,200	100.0	17.2	0.3	24.4	0.9	18.7	38.9
Other physical sciences	10,500	100.0	13.3	2.9	15.2	S	6.7	61.9
Social/related sciences, total	485,300	100.0	3.2	0.6	0.3	21.6	0.6	73.7
Economics	44,000	100.0	5.0	1.6	S	22.5	0.2	70.7
Political/related sciences	66,000	100.0	2.9	S	0.3	13.8	0.8	82.3
Psychology	271,500	100.0	2.5	0.6	S	28.1	0.7	68.0
Sociology/anthropology	39,500	100.0	1.8	0.3	S	18.7	0.3	78.7
Other social sciences	64,300	100.0	5.9	0.5	1.6	3.7	0.5	87.7
Engineering, total	430,600	100.0	12.9	0.2	1.2	0.1	58.8	26.8
Aerospace/related engineering	18,200	100.0	6.0	S	0.5	S	52.7	40.1
Chemical engineering	23,000	100.0	4.3	0.4	3.9	S	64.3	26.5
Civil/architectural engineering	69,200	100.0	2.7	S	0.7	0.3	63.3	32.8
Electrical/related engineering	142,700	100.0	23.5	S	0.3	S	55.6	20.6
Industrial engineering	22,800	100.0	21.5	S	S	0.4	46.5	31.6
Mechanical engineering	65,800	100.0	8.4	S	0.6	S	67.0	24.0
Other engineering	89,100	100.0	8.5	0.8	3.4	0.1	57.4	29.9
Non-S&E degrees, total	1,388,200	100.0	6.5	1.3	0.6	3.1	6.7	81.9
Business/management	525,200	100.0	10.9	0.3	0.6	1.6	13.2	73.4
Education	334,900	100.0	4.2	1.1	0.1	3.3	0.7	90.4
Health	95,200	100.0	1.8	6.2	2.3	4.3	1.4	84.1
Other non-S&E	432,900	100.0	4.0	1.5	0.5	4.4	4.5	85.1

See explanatory notes, if any, and SOURCE at end of table.

Appendix table 3-2.

Educational attainment of employed U.S. scientists and engineers, by level and field of highest degree and broad occupation category: 1997

Field of highest degree	All occupations, total		Occupation					Non-S&E occupations
			Computer/math scientists	Life/related scientists	Physical/related scientists	Social/related scientists	Engineers	
	Number	Percent	Percent					
Doctorate, total								
All degree fields, total	696,000	100.0	8.5	16.1	12.0	17.4	11.4	34.7
S&E degree fields, total	580,300	100.0	8.8	18.8	14.4	19.0	13.3	25.8
Sciences, total	482,000	100.0	8.7	22.4	16.7	22.9	2.4	26.9
Computer/math sciences, total ...	36,900	100.0	77.5	0.5	1.1	0.3	3.3	17.3
Computer/information sciences ...	9,700	100.0	77.3	1.0	S	S	4.1	17.5
Mathematical sciences	27,200	100.0	77.6	0.4	1.5	0.4	2.9	17.3
Life/related sciences, total	162,500	100.0	1.8	59.9	3.4	0.8	0.8	33.3
Agricultural/food sciences	16,800	100.0	1.2	67.3	3.6	0.6	1.2	26.2
Biological sciences	141,200	100.0	1.9	59.3	3.1	0.7	0.6	34.4
Environmental life sciences	4,500	100.0	2.2	51.1	8.9	4.4	6.7	24.4
Physical/related sciences, total ...	122,200	100.0	5.2	6.1	60.5	0.2	7.0	21.1
Chemistry, except biochemistry ...	62,500	100.0	2.4	9.0	60.8	S	4.0	23.7
Earth science, geology and oceanography	16,100	100.0	2.5	1.2	77.0	0.6	2.5	16.1
Physics/astronomy	41,800	100.0	10.5	2.9	54.3	0.2	12.7	19.4
Other physical sciences	1,800	100.0	S	22.2	38.9	S	16.7	16.7
Social/related sciences, total	160,500	100.0	2.6	1.7	0.6	67.6	0.4	27.1
Economics	21,500	100.0	2.3	0.9	0.5	70.2	S	26.0
Political/related sciences	16,500	100.0	1.8	S	1.2	62.4	0.6	35.2
Psychology	85,000	100.0	1.9	2.6	S	75.2	0.4	20.0
Sociology/anthropology	22,800	100.0	2.6	1.8	0.4	64.5	S	31.1
Other social sciences	14,600	100.0	8.2	0.7	3.4	31.5	1.4	54.8
Engineering, total	98,200	100.0	9.1	1.2	2.7	0.1	66.6	20.3
Aerospace/related engineering	4,000	100.0	12.5	S	2.5	S	70.0	15.0
Chemical engineering	13,300	100.0	3.0	1.5	2.3	S	69.2	24.8
Civil/architectural engineering	9,400	100.0	3.2	S	2.1	S	78.7	14.9
Electrical/related engineering	26,300	100.0	16.3	0.4	1.5	S	61.2	20.5
Industrial engineering	3,300	100.0	15.2	S	S	S	51.5	33.3
Mechanical engineering	11,800	100.0	5.9	0.8	1.7	S	77.1	14.4
Other engineering	30,100	100.0	7.6	2.7	5.0	0.3	63.5	21.3
Non-S&E degrees, total	115,800	100.0	6.9	2.3	0.3	9.1	2.2	79.2
Business/management	12,000	100.0	3.3	S	S	9.2	S	86.7
Education	43,200	100.0	11.3	4.4	0.9	10.6	0.5	72.2
Health	S	S	S	S	S	S	S	S
Other non-S&E	60,600	100.0	4.5	1.3	S	7.9	3.8	82.5

S = suppressed for reasons of confidentiality and/or data reliability

ªIncludes professional degrees.

NOTES: The term "Scientists and Engineers" (S&Es) includes all people who have ever received a bachelor's degree or higher in an S&E field, plus people holding a non-S&E bachelor's or higher degree who were employed in an S&E occupation during either the 1993, 1995, or 1997 SESTAT surveys. Figures are rounded to nearest hundred. Details may not add to total because of rounding.

SOURCE: National Science Foundation, Division of Science Resources Studies (NSF/SRS), Scientists and Engineers Statistical Data System (SESTAT), 1997.

See page 3-4 in Volume 1.

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Appendix table 3-3

Employed U.S. scientists and engineers, with job closely related to field of highest degree, by degree level, field of highest degree, and years since degree: 1997
(Percent)

Field of highest degree	Employed S&Es, total	Years since degree							
		1-5 years	6-10 years	11-15 years	16-20 years	21-25 years	26-30 years	31-35 years	36+ years
All degree levels									
All science & engineering	44.8	48.0	50.9	48.6	44.2	37.7	37.9	39.4	37.8
Engineering	53.5	56.8	54.4	55.8	57.0	49.4	48.4	47.1	48.1
Aerospace engineering	41.9	46.0	44.1	48.6	40.3	31.1	34.0	NA	NA
Chemical engineering	46.4	50.0	52.1	45.6	38.2	39.6	51.6	41.8	52.8
Civil engineering	66.6	69.2	69.4	71.7	63.6	65.8	63.1	61.5	63.3
Electrical engineering	55.6	58.3	55.9	58.3	64.2	47.2	46.5	48.2	53.7
Industrial engineering	37.1	42.8	32.7	30.8	55.4	36.7	31.5	NA	28.3
Mechanical engineering	50.6	52.4	53.3	53.1	61.2	44.6	46.6	41.4	40.8
Other engineering	50.9	58.4	52.0	54.5	47.0	51.1	44.7	44.9	42.2
Life sciences	47.2	51.1	60.5	49.7	43.4	38.9	40.4	47.6	36.5
Agriculture	47.4	57.2	56.5	40.0	50.1	44.1	38.1	65.6	22.3
Biological sciences	47.5	50.7	61.0	52.6	42.1	38.8	40.5	43.1	42.9
Health/medical	44.3	45.5	63.6	51.7	37.4	30.7	48.1	NA	NA
Computer math sciences	58.7	67.9	68.6	64.5	60.6	44.0	35.5	26.7	34.2
Computer sciences	73.4	74.5	76.1	73.7	74.5	61.3	53.9	NA	NA
Mathematical sciences	41.3	56.1	50.0	39.3	45.6	36.0	32.7	26.1	33.2
Physical sciences	46.4	58.6	55.6	41.1	45.4	39.7	36.9	41.6	42.7
Chemistry	50.4	65.3	65.5	42.3	54.9	36.1	40.7	46.5	40.6
Geosciences	45.0	55.5	47.1	35.8	45.2	45.7	33.1	58.7	48.2
Physics/astronomy	39.4	52.3	45.6	36.2	28.0	34.0	32.9	34.9	43.8
Other physical sciences	48.4	49.8	57.2	63.9	40.0	NA	NA	NA	NA
Social sciences	33.2	36.0	34.7	35.9	32.2	29.7	30.8	31.0	23.5
Economics	28.1	33.2	28.0	26.2	25.7	28.6	23.7	32.8	20.7
Political sciences	20.7	25.8	20.8	18.9	21.4	15.4	16.8	16.9	16.4
Psychology	41.8	43.4	43.7	49.5	39.4	35.0	37.4	56.2	26.8
Sociology/anthropology	30.9	31.0	37.4	30.1	28.7	31.8	32.8	25.3	18.1
Other social sciences	35.4	37.7	37.8	35.5	34.4	30.9	37.0	24.1	42.0
Bachelor's									
All science & engineering	38.7	41.1	45.1	42.7	38.0	31.1	32.2	34.4	35.0
Engineering	51.4	52.8	52.0	54.5	56.2	47.9	46.3	45.3	47.5
Aerospace engineering	38.6	36.8	36.9	48.4	37.1	NA	NA	NA	NA
Chemical engineering	43.7	46.8	51.5	41.6	36.5	26.2	54.8	35.3	53.9
Civil engineering	66.0	67.5	69.8	72.7	61.4	66.2	63.5	58.4	63.1
Electrical engineering	53.0	52.8	52.3	55.9	62.6	48.2	44.3	48.8	51.8
Industrial engineering	33.4	36.3	26.6	30.7	52.9	NA	NA	NA	NA
Mechanical engineering	49.9	50.6	52.6	52.8	63.9	44.2	44.7	39.0	40.6
Other engineering	46.7	53.8	47.8	53.0	45.8	43.9	38.3	39.7	41.1
Life sciences	40.2	44.6	54.6	41.3	37.3	31.3	34.0	39.3	31.2
Agriculture	43.1	51.2	51.1	33.1	48.4	41.9	33.4	NA	21.4
Biological sciences	39.7	43.9	54.7	43.9	34.9	29.7	33.4	32.2	35.3
Health/medical	37.6	40.1	NA	47.3	26.5	24.2	NA	NA	NA
Computer math sciences	55.4	64.7	66.7	61.7	58.0	38.8	30.8	23.2	30.1
Computer sciences	72.5	71.9	75.4	72.8	73.5	62.3	NA	NA	NA
Mathematical sciences	35.9	52.9	46.1	29.7	41.0	29.1	27.9	22.3	29.1
Physical sciences	40.4	53.2	51.8	34.4	39.4	31.4	28.6	36.7	38.2
Chemistry	46.7	62.4	68.5	37.6	51.1	28.1	34.3	43.1	34.5
Geosciences	35.5	46.6	30.6	29.7	37.7	33.3	NA	NA	NA
Physics/astronomy	29.2	42.0	40.5	19.7	18.9	16.4	23.0	NA	NA
Other physical sciences	43.4	46.5	NA	NA	NA	NA	NA	NA	NA
Social sciences	25.0	29.1	26.6	23.5	21.6	22.4	24.0	25.0	19.3
Economics	22.1	27.5	24.3	19.9	15.9	21.1	17.3	26.8	18.7
Political sciences	16.9	22.0	17.6	14.4	15.7	11.9	13.0	16.0	12.7
Psychology	28.2	33.7	29.6	31.5	22.4	22.1	20.4	NA	15.9
Sociology/anthropology	27.9	27.0	34.0	23.6	26.6	28.9	31.5	24.6	NA
Other social sciences	29.3	32.1	32.5	25.2	24.8	25.1	34.1	20.8	NA

See explanatory notes, if any, and SOURCE at end of table.

Appendix table 3-3

Employed U.S. scientists and engineers, with job closely related to field of highest degree, by degree level, field of highest degree, and years since degree: 1997
(Percent)

Field of highest degree	Employed S&Es, total	Years since degree							
		1-5 years	6-10 years	11-15 years	16-20 years	21-25 years	26-30 years	31-35 years	36+ years
Master's									
All science & engineering	58.5	65.9	63.0	61.3	57.6	52.2	46.6	49.6	40.8
Engineering	57.5	63.5	58.3	59.1	58.0	51.3	51.1	50.5	48.1
Aerospace engineering	46.5	59.4	61.7	NA	NA	NA	NA	NA	NA
Chemical engineering	53.0	58.7	52.7	61.4	NA	NA	NA	NA	NA
Civil engineering	68.3	73.4	68.7	67.6	70.6	63.4	61.7	NA	NA
Electrical engineering	61.1	68.3	61.8	65.5	67.3	40.5	51.7	42.6	NA
Industrial engineering	46.0	51.0	45.5	NA	NA	NA	NA	NA	NA
Mechanical engineering	51.1	56.2	53.0	53.3	45.9	40.3	49.1	NA	NA
Other engineering	54.2	60.4	53.3	54.9	43.3	59.6	49.5	NA	NA
Life sciences	59.4	67.7	70.2	60.4	53.0	57.2	40.9	65.4	NA
Agriculture	59.3	78.0	65.4	NA	NA	NA	NA	NA	NA
Biological sciences	58.3	65.3	72.9	59.8	50.1	57.6	39.3	NA	NA
Health/medical	67.3	66.1	NA	NA	NA	NA	NA	NA	NA
Computer math sciences	66.5	75.3	73.3	74.2	65.1	54.3	42.2	NA	NA
Computer sciences	75.6	80.2	78.0	76.4	77.0	58.9	NA	NA	NA
Mathematical sciences	52.4	62.4	57.8	67.4	50.9	51.0	39.3	NA	NA
Physical sciences	52.7	68.0	59.9	46.1	51.0	53.7	40.3	36.0	39.0
Chemistry	54.5	71.4	61.7	37.0	NA	52.1	NA	NA	NA
Geosciences	58.0	68.0	68.5	44.7	56.9	NA	NA	NA	NA
Physics/astronomy	41.5	66.3	41.0	NA	NA	48.4	NA	NA	NA
Other physical sciences	64.7	NA	NA	NA	NA	NA	NA	NA	NA
Social sciences	56.5	62.2	58.5	60.1	57.3	50.0	49.2	51.4	33.8
Economics	47.9	58.4	NA	NA	NA	NA	NA	NA	NA
Political sciences	34.8	46.6	37.3	NA	40.5	23.2	NA	NA	NA
Psychology	65.9	69.7	69.1	67.9	63.9	57.4	67.4	NA	NA
Sociology/anthropology	46.2	59.8	NA	NA	NA	NA	NA	NA	NA
Other social sciences	51.7	56.2	48.0	NA	54.9	NA	NA	NA	NA
Doctorate									
All science & engineering	70.2	74.1	73.1	71.7	68.9	64.4	65.0	67.6	75.9
Engineering	64.8	66.0	66.6	66.6	67.5	59.6	60.6	62.3	73.5
Aerospace engineering	67.4	73.5	73.6	NA	NA	NA	NA	NA	NA
Chemical engineering	56.4	61.3	54.8	57.2	53.4	50.1	54.5	NA	NA
Civil engineering	70.5	71.4	63.8	75.6	NA	72.0	NA	NA	NA
Electrical engineering	65.6	63.8	71.4	65.9	79.3	61.5	54.0	NA	NA
Industrial engineering	66.1	71.8	61.1	NA	NA	NA	NA	NA	NA
Mechanical engineering	65.6	65.2	66.9	61.9	NA	69.5	NA	NA	NA
Other engineering	65.2	66.7	68.1	67.8	63.9	56.1	64.5	NA	NA
Life sciences	73.8	76.9	75.6	74.6	70.7	70.0	72.1	71.0	78.8
Agriculture	73.6	77.0	74.7	73.7	74.9	72.7	71.8	66.6	NA
Biological sciences	73.9	77.2	75.6	74.5	70.4	70.4	71.7	71.4	80.3
Health/medical	70.8	64.3	78.8	80.3	NA	54.6	NA	NA	NA
Computer math sciences	70.4	71.4	75.1	78.2	69.9	59.8	63.9	69.0	NA
Computer sciences	75.4	70.7	76.0	86.9	NA	NA	NA	NA	NA
Mathematical sciences	68.6	72.1	74.4	74.2	69.4	58.0	63.9	69.0	NA
Physical sciences	59.5	67.3	62.4	59.7	58.4	50.4	52.2	61.4	69.1
Chemistry	58.7	69.8	58.9	57.3	60.7	48.8	50.2	55.4	68.8
Geosciences	74.7	78.6	74.1	71.8	72.5	73.0	73.7	77.8	NA
Physics/astronomy	54.6	59.6	61.0	58.6	47.9	42.6	49.2	63.6	66.3
Other physical sciences	67.0	NA	NA	NA	NA	NA	NA	NA	NA
Social sciences	78.1	82.1	82.4	77.1	74.3	72.9	77.3	77.1	82.6
Economics	81.4	84.3	85.7	85.4	80.6	74.7	78.4	NA	NA
Political sciences	72.8	75.5	79.9	75.5	67.4	62.8	78.6	NA	NA
Psychology	81.6	86.2	87.1	79.4	78.8	75.1	78.7	79.4	83.4
Sociology/anthropology	70.7	75.1	70.8	64.0	65.7	74.4	75.1	NA	NA
Other social sciences	70.3	72.5	70.7	72.7	62.8	66.9	70.4	NA	NA

NA = data not available

SOURCE: National Science Foundation, Division of Science Resources Studies (NSF/SRS), Scientists and Engineers Statistical Data System (SESTAT), 1997.

See figure 3-1 and figure 3-2 in Volume 1.

Appendix table 3-4

Employed U.S. scientists and engineers with job closely or somewhat related to field of highest degree, by degree level, field of highest degree, and years since degree: 1997
(Percent)

Field of highest degree	Employed S&Es, total	Years since degree							
		1-5 years	6-10 years	11-15 years	16-20 years	21-25 years	26-30 years	31-35 years	36+ years
All degree levels									
All science & engineering	74.8	76.0	80.2	78.3	74.0	69.1	71.3	71.6	69.4
Engineering	87.7	90.9	89.3	89.6	87.8	85.0	86.7	86.2	76.8
Aerospace engineering	78.6	78.7	80.4	78.0	81.6	76.8	77.9	NA	NA
Chemical engineering	87.0	87.8	92.4	89.6	82.8	85.2	89.3	80.0	82.4
Civil engineering	90.5	93.2	91.9	91.7	88.9	85.3	91.8	94.3	87.7
Electrical engineering	90.6	93.3	91.4	91.5	91.0	89.2	88.7	82.7	87.3
Industrial engineering	81.8	87.5	83.4	79.3	88.3	79.1	75.7	NA	70.3
Mechanical engineering	87.0	89.9	89.5	91.3	90.0	84.3	86.3	87.3	67.8
Other engineering	84.5	90.5	85.9	88.3	83.1	81.8	81.8	86.5	69.3
Life sciences	72.4	75.3	83.1	73.0	70.3	66.2	67.7	70.6	63.7
Agriculture	73.3	78.3	84.9	65.8	73.0	74.4	64.0	85.0	60.3
Biological sciences	72.8	75.2	82.6	75.7	71.4	65.1	69.3	66.7	64.9
Health/medical	66.9	72.0	84.6	70.1	54.9	60.5	56.7	NA	NA
Computer math sciences	86.2	90.4	88.9	88.7	91.4	80.1	75.0	68.7	75.0
Computer sciences	92.6	94.6	91.7	92.6	94.3	89.2	82.8	NA	NA
Mathematical sciences	78.6	83.0	82.0	77.8	88.3	76.0	73.8	68.7	74.4
Physical sciences	76.8	82.8	85.6	73.3	78.7	72.4	73.1	71.8	66.4
Chemistry	79.7	87.7	92.4	78.8	84.3	69.0	75.4	70.4	68.8
Geosciences	70.2	77.3	72.1	64.1	72.0	74.4	65.3	72.7	56.3
Physics/astronomy	77.6	81.4	85.5	71.2	78.5	72.6	75.2	78.3	73.1
Other physical sciences	77.6	75.8	87.6	88.4	76.3	NA	NA	NA	NA
Social sciences	63.3	64.4	66.9	67.0	61.6	59.5	60.7	57.7	62.2
Economics	69.3	73.0	71.9	70.7	62.3	69.8	69.3	53.7	74.2
Political sciences	51.1	52.6	51.7	51.0	53.4	41.0	52.1	57.4	60.7
Psychology	69.9	70.5	73.7	77.3	67.6	64.2	63.3	73.0	61.0
Sociology/anthropology	58.8	59.6	69.0	58.1	58.5	57.5	57.6	53.6	44.8
Other social sciences	62.0	62.4	64.2	63.3	55.2	65.7	63.3	50.9	66.4
Bachelor's									
All science & engineering	70.0	70.4	75.9	74.0	69.0	63.9	66.5	67.1	66.8
Engineering	86.5	89.3	88.1	89.1	86.9	84.8	85.5	84.4	76.2
Aerospace engineering	76.4	72.8	76.8	75.4	79.3	NA	NA	NA	NA
Chemical engineering	84.9	85.2	92.0	87.6	80.7	79.7	88.5	75.8	82.0
Civil engineering	90.3	92.5	90.6	92.7	88.9	87.5	89.7	92.9	88.0
Electrical engineering	89.4	92.2	89.8	89.8	90.0	88.7	88.2	82.3	86.9
Industrial engineering	79.6	83.4	81.1	79.4	85.2	NA	NA	NA	NA
Mechanical engineering	86.4	89.3	89.8	91.6	91.0	82.8	85.4	85.3	67.0
Other engineering	81.5	87.9	83.4	88.6	79.6	76.2	79.7	82.8	69.6
Life sciences	66.2	70.0	78.9	65.4	64.2	60.6	59.9	61.5	58.3
Agriculture	69.4	73.6	82.2	60.5	70.3	72.3	60.2	NA	58.0
Biological sciences	66.1	70.0	78.3	67.7	64.8	58.6	60.4	56.1	56.9
Health/medical	59.3	65.0	NA	63.6	44.1	54.6	NA	NA	NA
Computer math sciences	83.9	88.0	87.6	86.9	89.5	76.7	72.2	64.7	73.8
Computer sciences	91.5	92.9	90.8	91.9	93.1	86.7	NA	NA	NA
Mathematical sciences	75.2	80.0	80.0	72.7	85.4	72.6	70.9	64.3	73.1
Physical sciences	70.3	78.0	81.8	64.7	73.3	63.5	65.1	67.2	59.9
Chemistry	74.1	84.3	92.0	68.2	79.9	60.0	68.5	65.5	63.5
Geosciences	61.1	69.5	57.5	57.8	64.7	64.7	NA	NA	NA
Physics/astronomy	71.1	75.4	84.0	56.4	77.5	56.2	72.0	NA	NA
Other physical sciences	73.7	73.2	NA	NA	NA	NA	NA	NA	NA
Social sciences	57.3	58.8	60.9	58.6	54.3	54.0	56.0	53.5	58.6
Economics	66.0	70.3	69.5	68.4	56.1	66.9	63.9	47.1	72.9
Political sciences	46.8	48.1	48.0	44.7	49.3	36.4	48.2	59.2	54.5
Psychology	60.7	63.4	64.6	68.2	56.2	55.0	51.4	NA	54.3
Sociology/anthropology	56.4	56.0	65.4	53.0	57.2	55.3	57.8	53.7	NA
Other social sciences	56.9	56.5	59.9	52.1	47.0	62.2	63.3	50.6	NA

See explanatory notes, if any, and SOURCE at end of table.

Appendix table 3-4

Employed U.S. scientists and engineers with job closely or somewhat related to field of highest degree, by degree level, field of highest degree, and years since degree: 1997
(Percent)

Field of highest degree	Employed S&Es, total	Years since degree							
		1–5 years	6–10 years	11–15 years	16–20 years	21–25 years	26–30 years	31–35 years	36+ years
Master's									
All science & engineering	86.6	91.4	90.4	88.2	84.9	80.4	80.3	84.1	79.2
Engineering	90.6	93.6	92.2	90.7	90.4	84.8	89.8	92.3	79.6
Aerospace engineering	82.6	87.0	88.8	NA	NA	NA	NA	NA	NA
Chemical engineering	94.7	96.3	97.0	97.7	NA	NA	NA	NA	NA
Civil engineering	90.2	94.5	96.4	87.8	88.5	76.3	96.0	NA	NA
Electrical engineering	93.8	95.5	94.9	96.7	93.6	90.3	90.3	82.6	NA
Industrial engineering	89.4	95.2	91.1	NA	NA	NA	NA	NA	NA
Mechanical engineering	88.8	91.5	87.5	89.0	84.5	90.6	88.3	NA	NA
Other engineering	88.0	91.6	88.1	86.1	88.6	87.8	83.6	NA	NA
Life sciences	85.5	88.7	89.0	86.2	84.6	77.1	83.9	92.3	NA
Agriculture	86.2	93.3	87.9	NA	NA	NA	NA	NA	NA
Biological sciences	84.3	86.1	87.4	87.5	84.7	74.3	86.5	NA	NA
Health/medical	92.4	95.2	NA	NA	NA	NA	NA	NA	NA
Computer math sciences	91.8	96.1	91.8	95.3	95.3	87.2	78.6	NA	NA
Computer sciences	95.1	97.9	93.6	95.4	96.5	93.3	NA	NA	NA
Mathematical sciences	86.7	91.3	85.8	94.9	93.9	82.7	77.4	NA	NA
Physical sciences	84.7	89.2	92.2	85.3	84.3	85.6	76.0	71.9	76.7
Chemistry	87.3	93.0	96.9	96.1	NA	83.7	NA	NA	NA
Geosciences	84.9	87.7	92.1	76.5	87.5	NA	NA	NA	NA
Physics/astronomy	79.8	88.0	88.1	NA	NA	83.9	NA	NA	NA
Other physical sciences	91.0	NA	NA	NA	NA	NA	NA	NA	NA
Social sciences	81.2	87.6	87.0	84.2	77.7	74.4	72.7	69.8	78.6
Economics	81.3	84.7	NA	NA	NA	NA	NA	NA	NA
Political sciences	71.2	80.1	79.2	NA	65.2	53.1	NA	NA	NA
Psychology	86.5	91.4	92.0	86.1	83.8	80.4	84.1	NA	NA
Sociology/anthropology	70.2	87.5	NA	NA	NA	NA	NA	NA	NA
Other social sciences	75.6	84.0	73.0	NA	71.2	NA	NA	NA	NA
Doctorate									
All science & engineering	92.8	95.0	93.7	93.2	92.7	90.2	90.8	90.9	93.3
Engineering	92.0	94.0	91.6	94.9	93.1	88.1	88.8	91.1	93.3
Aerospace engineering	89.9	97.3	95.9	NA	NA	NA	NA	NA	NA
Chemical engineering	89.8	94.5	88.5	94.7	91.0	84.9	84.1	NA	NA
Civil engineering	97.1	96.3	94.4	95.8	NA	97.5	NA	NA	NA
Electrical engineering	93.0	93.1	94.3	95.3	95.7	91.3	89.1	NA	NA
Industrial engineering	83.5	88.0	78.5	NA	NA	NA	NA	NA	NA
Mechanical engineering	92.1	92.3	93.6	97.5	NA	86.3	NA	NA	NA
Other engineering	91.5	95.3	91.0	93.7	91.4	88.1	87.8	NA	NA
Life sciences	93.8	96.4	95.1	93.0	92.4	92.1	92.0	93.7	91.4
Agriculture	93.3	95.1	95.8	96.5	95.0	86.9	90.0	93.2	NA
Biological sciences	93.8	96.5	95.0	92.5	92.0	92.6	92.2	93.8	93.0
Health/medical	94.9	97.5	96.3	94.0	NA	92.7	NA	NA	NA
Computer math sciences	93.5	93.5	96.3	92.2	95.3	89.1	94.3	91.2	NA
Computer sciences	88.0	97.8	98.5	96.1	NA	NA	NA	NA	NA
Mathematical sciences	91.9	89.4	94.5	90.4	94.0	88.6	94.3	91.2	NA
Physical sciences	89.9	92.6	89.9	92.4	90.1	86.0	88.1	86.6	92.7
Chemistry	91.0	94.7	91.5	92.1	92.6	86.7	91.6	83.0	89.8
Geosciences	93.0	95.3	93.3	93.9	89.2	92.0	91.4	95.0	NA
Physics/astronomy	87.0	89.3	85.6	92.7	86.2	82.3	81.6	88.8	96.4
Other physical sciences	89.1	NA	NA	NA	NA	NA	NA	NA	NA
Social sciences	94.5	96.3	95.6	93.5	94.1	92.9	93.8	93.4	95.2
Economics	97.0	97.1	99.4	97.4	96.4	95.3	96.2	NA	NA
Political sciences	93.1	96.2	92.5	89.6	93.6	95.7	90.7	NA	NA
Psychology	95.5	97.4	97.4	94.2	96.2	92.8	92.9	94.6	94.8
Sociology/anthropology	92.6	96.1	92.4	91.4	91.0	91.6	93.7	NA	NA
Other social sciences	89.8	90.0	88.8	90.9	85.2	87.1	97.9	NA	NA

NA = data not available

SOURCE: National Science Foundation, Division of Science Resources Studies (NSF/SRS), Scientists and Engineers Statistical Data System (SESTAT), 1997.

Appendix table 3-5.

U.S. scientists and engineers, by highest degree attained, occupation, and employment status: 1997

Occupation	S&Es, total	Employed			Unemployed/ seeking job	Not in labor force		
		Total	Full-time	Part-time		Total	Retired	Not seeking job
All degree levels^a								
All occupations, total^b	12,512,000	10,585,600	9,476,700	1,109,000	191,900	1,734,600	1,005,100	729,500
S&E occupations, total	3,899,000	3,369,400	3,105,000	264,400	52,900	476,600	334,300	142,300
Scientists, total	2,261,500	1,995,100	1,791,000	204,000	30,000	236,400	126,000	110,500
Computer/math scientists, total	1,129,700	1,039,500	974,400	65,100	14,600	75,700	40,000	35,700
Computer/information scientists	1,003,400	933,200	895,000	38,200	13,200	56,900	28,800	28,200
Mathematical scientists	42,400	34,700	31,900	2,900	600	7,000	4,300	2,700
Postsecondary teachers- computer/math sciences	84,000	71,500	47,500	24,000	800	11,700	6,900	4,800
Life/related scientists, total	387,300	321,800	292,700	29,000	7,400	58,100	26,700	31,400
Agricultural/food scientists	50,500	43,000	40,300	2,700	700	6,700	5,000	1,700
Biological scientists	221,000	181,900	172,000	9,900	5,100	33,900	11,500	22,400
Environmental life scientists	23,400	20,200	18,500	1,700	S	3,200	3,200	S
Postsecondary teachers- life/related sciences	92,400	76,600	61,800	14,800	1,500	14,300	7,000	7,300
Physical/related scientists, total	343,500	284,900	259,500	25,300	4,600	54,100	37,000	17,200
Chemistry, except biochemistry	147,100	119,800	114,400	5,400	2,000	25,300	17,400	7,900
Earth scientists/ geologists/oceanographers	82,100	68,600	63,600	5,000	1,200	12,300	8,900	3,400
Physicists/astronomers	38,400	31,500	28,500	3,000	300	6,600	5,600	900
Other physical/related scientists	18,700	16,700	16,200	600	600	1,300	600	800
Postsecondary teachers- physical/related sciences	57,200	48,200	36,800	11,300	400	8,700	4,500	4,200
Social/related scientists, total	401,000	349,000	264,400	84,500	3,500	48,500	22,300	26,200
Economists	50,800	45,100	37,100	8,000	600	5,100	3,000	2,100
Political/related scientists	11,000	9,100	6,900	2,300	200	1,700	400	1,300
Psychologists	205,800	181,700	134,600	47,100	1,500	22,600	8,000	14,600
Sociologists/anthropologists	19,500	15,800	13,100	2,700	200	3,500	1,000	2,500
Other social/related scientists	13,500	11,900	9,200	2,700	300	1,300	300	1,000
Postsecondary teachers- social/related sciences	100,300	85,300	63,600	21,700	600	14,300	9,600	4,700
Engineers, total	1,637,500	1,374,400	1,314,000	60,400	22,900	240,200	208,400	31,800
Aerospace/related engineers	99,400	72,500	70,200	2,400	1,100	25,700	23,600	2,100
Chemical engineers	93,900	76,300	72,300	3,900	1,100	16,400	13,700	2,800
Civil/architectural engineers	245,600	206,800	196,300	10,500	3,200	35,700	30,900	4,800
Electrical/related engineers	430,500	364,800	352,300	12,500	6,300	59,500	52,800	6,700
Industrial engineers	93,800	79,700	78,400	1,300	1,700	12,400	9,300	3,100
Mechanical engineers	319,500	271,100	263,400	7,800	3,400	45,000	40,800	4,200
Other engineers	313,600	269,200	253,900	15,300	5,700	38,700	32,400	6,300
Postsecondary teachers-engineers	41,300	33,900	27,200	6,700	500	6,800	4,900	1,900
Non-S&E occupations, total	8,613,100	7,216,200	6,371,600	844,600	138,900	1,257,900	670,700	587,200
Managers/administrators	2,321,300	2,019,900	1,941,100	78,800	29,100	272,300	212,000	60,300
Health/related	920,300	802,400	676,700	125,700	10,900	107,000	44,500	62,500
Teachers, except S&E postsecondary	985,500	779,100	626,600	152,500	9,000	197,400	123,000	74,400
Sales/marketing	1,085,700	920,300	800,900	119,400	19,900	145,600	69,800	75,800
Other non-S&E occupations	3,300,300	2,694,500	2,326,300	368,100	70,100	535,800	221,500	314,300

See explanatory notes, if any, and SOURCE at end of table.

Appendix table 3-5.

U.S. scientists and engineers, by highest degree attained, occupation, and employment status: 1997

Occupation	S&Es, total	Employed			Unemployed/ seeking job	Not in labor force		
		Total	Full-time	Part-time		Total	Retired	Not seeking job
Bachelor's								
All occupations, total	7,456,800	6,193,700	5,545,400	648,300	123,600	1,139,500	604,800	534,700
S&E occupations, total	2,252,100	1,916,800	1,794,800	122,000	31,800	303,500	214,100	89,400
Scientists, total	1,135,500	1,000,200	915,400	84,800	16,700	118,600	52,300	66,300
Computer/math scientists, total	731,900	675,300	639,100	36,200	10,500	46,000	21,000	25,000
Computer/information scientists	698,700	649,900	622,900	27,000	10,300	38,500	17,500	21,000
Mathematical scientists	16,400	11,900	11,400	500	200	4,200	2,700	1,600
Postsecondary teachers-								
computer/math sciences	16,800	13,500	4,800	8,700	S	3,300	900	2,400
Life/related scientists, total	158,100	125,200	111,400	13,800	3,100	29,900	8,700	21,200
Agricultural/food scientists	25,800	22,200	21,000	1,200	500	3,100	2,100	1,000
Biological scientists	94,300	73,300	69,600	3,600	2,000	19,000	3,600	15,400
Environmental life scientists	16,900	14,600	13,100	1,600	S	2,300	2,300	S
Postsecondary teachers-								
life/related sciences	21,100	15,000	7,700	7,400	600	5,500	700	4,800
Physical/related scientists, total	163,300	131,700	118,200	13,500	2,400	29,200	18,800	10,400
Chemistry, except biochemistry	88,100	70,600	67,900	2,700	1,000	16,500	10,100	6,300
Earth scientists/								
geologists/oceanographers	42,100	34,900	31,900	2,900	700	6,500	5,400	1,100
Physicists/astronomers	10,200	7,400	6,400	1,100	S	2,800	2,500	200
Other physical/related scientists	9,000	8,100	7,900	100	600	300	S	300
Postsecondary teachers-								
physical/related sciences	13,900	10,700	4,000	6,700	S	3,200	700	2,500
Social/related scientists, total	82,200	68,000	46,700	21,300	800	13,500	3,700	9,700
Economists	18,500	15,900	11,900	4,100	500	2,100	1,600	500
Political/related scientists	6,100	5,100	3,600	1,500	S	1,000	S	1,000
Psychologists	32,500	26,200	20,100	6,100	S	6,300	1,000	5,300
Sociologists/anthropologists	9,600	7,000	6,000	1,000	S	2,600	500	2,100
Other social/related scientists	5,500	4,500	3,000	1,600	200	700	100	600
Postsecondary teachers-								
social/related sciences	10,100	9,300	2,200	7,100	S	800	500	300
Engineers, total	1,116,600	916,600	879,400	37,200	15,100	184,900	161,800	23,000
Aerospace/related engineers	61,200	40,900	39,900	1,000	600	19,700	18,100	1,500
Chemical engineers	61,000	49,300	46,700	2,600	300	11,300	9,400	1,900
Civil/architectural engineers	181,400	150,500	143,100	7,400	2,600	28,400	24,500	3,800
Electrical/related engineers	290,500	239,600	231,700	8,000	4,400	46,500	41,800	4,700
Industrial engineers	70,100	58,700	58,200	600	1,400	10,000	8,000	2,100
Mechanical engineers	238,500	200,300	194,600	5,700	2,000	36,300	32,900	3,400
Other engineers	206,300	171,800	162,500	9,200	3,700	30,800	26,400	4,400
Postsecondary teachers-engineers	7,400	5,400	2,700	2,700	100	1,900	800	1,200
Non-S&E occupations, total	5,204,700	4,276,900	3,750,600	526,300	91,800	836,000	390,700	445,300
Managers/administrators	1,319,600	1,141,100	1,095,300	45,800	14,200	164,300	129,800	34,500
Health/related	350,900	280,400	221,900	58,500	6,800	63,700	16,900	46,800
Teachers, except S&E postsecondary ..	482,800	380,700	294,200	86,400	4,500	97,500	45,000	52,500
Sales/marketing	848,600	718,800	630,200	88,600	14,400	115,400	55,500	60,000
Other non-S&E occupations	2,202,800	1,755,900	1,508,900	247,000	51,800	395,000	143,600	251,500

See explanatory notes, if any, and SOURCE at end of table.

Appendix table 3-5.

U.S. scientists and engineers, by highest degree attained, occupation, and employment status: 1997

Occupation	S&Es, total	Employed			Unemployed/ seeking job	Not in labor force		
		Total	Full-time	Part-time		Total	Retired	Not seeking job
Master's								
All occupations, total	3,311,300	2,819,800	2,503,300	316,500	52,200	439,300	289,600	149,700
S&E occupations, total	1,100,000	967,900	863,800	104,100	14,000	118,200	76,300	41,900
Scientists, total	671,100	592,000	507,400	84,600	7,200	71,900	37,700	34,200
Computer/math scientists, total	328,500	301,600	277,400	24,200	3,100	23,800	14,600	9,200
Computer/information scientists	272,500	254,200	244,600	9,500	2,400	15,900	9,700	6,200
Mathematical scientists	18,100	15,900	14,200	1,700	200	2,000	1,200	800
Postsecondary teachers-								
computer/math sciences	37,800	31,500	18,600	12,900	500	5,900	3,700	2,200
Life/related scientists, total	83,800	70,300	61,700	8,500	1,200	12,400	5,700	6,600
Agricultural/food scientists	12,300	10,900	10,300	600	100	1,400	900	400
Biological scientists	45,400	37,600	34,800	2,800	800	7,000	2,500	4,500
Environmental life scientists	4,900	4,200	4,100	100	S	700	700	S
Postsecondary teachers-								
life/related sciences	21,200	17,600	12,600	5,000	300	3,300	1,500	1,800
Physical/related scientists, total	83,300	69,100	61,800	7,300	1,000	13,100	8,200	4,900
Chemistry, except biochemistry	24,600	20,200	18,900	1,300	500	3,900	3,200	600
Earth scientists/								
geologists/oceanographers	28,000	23,100	21,500	1,600	300	4,600	2,500	2,100
Physicists/astronomers	11,300	9,000	7,800	1,200	100	2,200	1,700	400
Other physical/related scientists	7,800	7,100	6,700	400	S	700	300	400
Postsecondary teachers-								
physical/related sciences	11,600	9,700	6,900	2,800	100	1,800	500	1,300
Social/related scientists, total	175,600	151,100	106,500	44,600	2,000	22,600	9,200	13,400
Economists	23,200	21,100	17,700	3,400	S	2,100	600	1,500
Political/related scientists	3,700	3,200	2,500	700	100	400	100	300
Psychologists	108,600	95,000	67,100	27,900	1,300	12,300	4,800	7,600
Sociologists/anthropologists	5,600	5,200	4,100	1,100	200	200	S	200
Other social/related scientists	4,100	3,700	2,700	1,000	S	400	S	400
Postsecondary teachers-								
social/related sciences	30,400	22,900	12,400	10,500	300	7,200	3,700	3,400
Engineers, total	428,900	375,900	356,300	19,500	6,800	46,300	38,500	7,700
Aerospace/related engineers	32,900	27,300	26,000	1,200	400	5,300	4,800	500
Chemical engineers	24,600	19,900	18,900	1,000	600	4,100	3,400	800
Civil/architectural engineers	59,100	51,700	48,800	2,800	600	6,900	6,000	900
Electrical/related engineers	120,200	107,400	103,500	3,900	1,700	11,100	9,400	1,700
Industrial engineers	21,800	19,300	18,700	600	300	2,200	1,300	900
Mechanical engineers	70,800	61,600	59,900	1,700	1,300	7,900	7,100	800
Other engineers	87,100	79,500	74,500	4,900	1,700	5,900	4,300	1,600
Postsecondary teachers-engineers	12,400	9,300	6,000	3,300	400	2,800	2,300	500
Non-S&E occupations, total	2,211,300	1,851,900	1,639,600	212,400	38,100	321,200	213,400	107,800
Managers/administrators	826,600	724,800	698,500	26,300	13,300	88,400	65,700	22,800
Health/related	109,900	92,500	73,400	19,100	1,800	15,600	8,100	7,500
Teachers, except S&E postsecondary ..	412,700	323,300	268,700	54,600	2,500	86,900	68,200	18,700
Sales/marketing	215,700	183,100	157,800	25,300	5,400	27,200	13,500	13,600
Other non-S&E occupations	646,300	528,200	441,200	87,000	15,100	103,100	57,900	45,100

See explanatory notes, if any, and SOURCE at end of table.

Appendix table 3-5.

U.S. scientists and engineers, by highest degree attained, occupation, and employment status: 1997

Occupation	S&Es, total	Employed			Unemployed/ seeking job	Not in labor force		
		Total	Full-time	Part-time		Total	Retired	Not seeking job
Doctorate								
All occupations, total	789,700	696,000	637,400	58,700	9,700	83,900	67,700	16,200
S&E occupations, total	511,900	454,700	418,900	35,800	6,300	50,900	41,300	9,600
Scientists, total	422,700	375,300	342,800	32,400	5,300	42,100	33,500	8,600
Computer/math scientists, total	64,800	59,000	54,500	4,500	1,000	4,900	3,900	1,000
Computer/information scientists	27,900	25,700	24,300	1,400	600	1,700	1,100	600
Mathematical scientists	7,800	6,900	6,300	700	100	700	500	200
Postsecondary teachers-								
computer/math sciences	29,100	26,300	23,900	2,400	300	2,500	2,300	200
Life/related scientists, total	128,400	111,800	105,500	6,300	2,400	14,200	10,900	3,200
Agricultural/food scientists	12,200	9,800	8,900	900	200	2,200	1,900	300
Biological scientists	73,400	64,100	60,900	3,200	2,000	7,300	4,900	2,400
Environmental life scientists	1,500	1,200	1,200	S	S	300	300	S
Postsecondary teachers-								
life/related sciences	41,300	36,700	34,600	2,100	200	4,400	3,900	500
Physical/related scientists, total	96,100	83,700	79,200	4,500	1,200	11,200	9,500	1,700
Chemistry, except biochemistry	34,400	28,900	27,500	1,400	600	5,000	4,000	900
Earth scientists/								
geologists/oceanographers	11,900	10,500	10,000	500	200	1,200	1,000	200
Physicists/astronomers	16,900	15,100	14,300	800	100	1,600	1,300	300
Other physical/related scientists	1,700	1,400	1,400	S	S	300	300	S
Postsecondary teachers-								
physical/related sciences	31,200	27,800	25,900	1,800	300	3,100	2,800	300
Social/related scientists, total	133,300	120,800	103,600	17,200	800	11,800	9,200	2,600
Economists	8,700	7,800	7,300	600	100	800	700	100
Political/related scientists	1,200	900	800	100	100	300	300	S
Psychologists	58,000	54,300	42,400	11,800	200	3,500	2,100	1,400
Sociologists/anthropologists	4,300	3,600	3,000	600	S	700	500	200
Other social/related scientists	3,000	2,700	2,600	100	S	300	200	100
Postsecondary teachers-								
social/related sciences	58,100	51,600	47,600	4,000	300	6,200	5,400	800
Engineers, total	89,200	79,400	76,100	3,300	1,000	8,800	7,800	900
Aerospace/related engineers	5,100	4,300	4,200	100	100	700	600	100
Chemical engineers	8,300	7,100	6,700	300	300	1,000	900	100
Civil/architectural engineers	4,500	4,000	3,700	300	S	400	400	100
Electrical/related engineers	18,800	16,800	16,400	400	200	1,800	1,600	200
Industrial engineers	1,400	1,400	1,300	100	S	S	S	S
Mechanical engineers	9,900	9,000	8,700	300	100	800	800	S
Other engineers	19,900	17,700	16,600	1,100	300	2,000	1,800	200
Postsecondary teachers-engineers	21,300	19,200	18,500	700	100	2,000	1,900	200
Non-S&E occupations, total	277,800	241,300	218,400	22,900	3,400	33,100	26,400	6,700
Managers/administrators	115,300	102,400	98,300	4,100	1,200	11,700	10,600	1,100
Health/related	26,400	21,800	18,900	2,900	400	4,100	3,100	1,000
Teachers, except S&E postsecondary	68,100	57,900	51,800	6,100	700	9,500	8,000	1,400
Sales/marketing	9,600	8,300	6,500	1,800	100	1,200	700	500
Other non-S&E occupations	58,500	51,000	43,000	8,000	1,000	6,500	3,900	2,600

S = suppressed for reasons of confidentiality and/or data reliability

^a Includes professional degrees.^b Total excludes 18,700 individuals who reported never having worked. For unemployed individuals, occupation is for their previous reported job.

NOTES: The term "Scientists and Engineers" (S&Es) includes all persons who have ever received a bachelor's degree or higher in a science or engineering (S&E) field, plus persons holding a non-S&E bachelor's or higher degree who were employed in a S&E occupation during either the 1993, 1995 or 1997 SESTAT surveys. Figures are rounded to nearest hundred. Details may not add to total because of rounding.

SOURCE: National Science Foundation, Division of Science Resources Studies (NSF/SRS), Scientists and Engineers Statistical Data System (SESTAT), 1997.

See figure 3-4 in Volume 1.

Appendix table 3-6.
Employed U.S. scientists and engineers, by highest degree attained, occupation, and employment sector: 1997

Occupation	Business/industry				Educational institution				Government		
	Employed S&Es, total	Total	Profit	Self-employed	Non-profit	Total	4-year college/university	Other	Total	Federal	State/local
All degree levels^a											
All occupations, total	10,585,600	7,264,900	5,910,800	728,100	625,900	1,953,500	940,600	1,012,900	1,367,300	575,100	792,100
S&E occupations, total	3,369,400	2,343,600	2,126,400	110,100	107,000	586,700	475,700	111,000	439,100	250,600	188,600
Scientists, total	1,995,100	1,236,900	1,066,000	81,000	89,800	512,700	409,100	103,600	245,500	139,600	105,900
Computer/math scientists, total	1,039,500	828,900	771,800	25,100	32,000	121,200	88,200	33,000	89,400	53,300	36,100
Computer/information scientists	933,200	811,400	757,400	24,600	29,400	45,400	35,600	9,800	76,400	44,100	32,300
Mathematical scientists	34,700	16,700	13,900	500	2,300	5,000	4,700	300	13,000	9,200	3,800
Postsecondary teachers-											
computer/math scientists	71,500	800	500	S	200	70,700	47,900	22,800	S	S	S
Life/related scientists, total	321,800	102,700	81,400	8,000	13,300	154,500	139,100	15,400	64,600	37,900	26,700
Agricultural/food scientists	43,000	24,600	21,100	3,000	500	9,500	9,400	100	9,000	5,200	3,800
Biological scientists	181,900	70,800	57,200	2,900	10,800	69,800	68,600	1,200	41,300	22,500	18,800
Environmental life scientists	20,200	5,800	2,600	2,000	1,200	400	400	S	14,000	10,100	3,800
Postsecondary teachers-											
life/related scientists	76,600	1,500	500	200	800	74,800	60,600	14,200	300	100	300
Physical/related scientists, total	284,900	156,100	144,800	6,200	5,100	80,000	71,100	8,900	48,700	30,500	18,200
Chemistry, except biochemistry	119,800	94,300	90,300	1,800	2,200	10,500	10,400	100	15,000	6,400	8,700
Earth scientists/											
geologists/oceanographers	68,600	42,200	37,600	3,800	800	9,100	8,700	400	17,400	12,400	5,000
Physicists/astronomers	31,500	12,800	10,700	400	1,700	11,100	11,000	100	7,600	6,800	800
Other physical/related scientists	16,700	6,700	6,100	200	400	1,400	1,100	300	8,600	4,900	3,700
Postsecondary teachers-											
physical/related scientists	48,200	100	100	S	S	48,000	40,000	8,000	100	100	S
Social/related scientists, total	349,000	149,200	68,000	41,700	39,400	157,000	110,600	46,400	42,800	17,900	24,900
Economists	45,100	28,400	23,100	2,900	2,400	4,300	4,200	S	12,400	8,900	3,500
Political/related scientists	9,100	3,800	1,700	600	1,600	1,500	1,500	S	3,800	2,100	1,700
Psychologists	181,700	105,400	36,900	37,400	31,100	55,800	21,200	34,600	20,500	4,300	16,300
Sociologists/anthropologists	15,800	5,600	3,700	700	1,200	6,600	6,100	400	3,700	1,500	2,200
Other social/related scientists	11,900	5,600	2,500	200	3,000	4,300	3,900	400	1,900	700	1,200
Postsecondary teachers-											
social/related scientists	85,300	300	100	S	200	84,500	73,700	10,800	500	500	S
Engineers, total	1,374,400	1,106,700	1,060,400	29,100	17,200	74,000	66,700	7,400	193,600	110,900	82,700
Aerospace/related engineers	72,500	55,600	53,700	800	1,100	3,100	3,000	100	13,800	13,800	100
Chemical engineers	76,300	71,200	69,300	1,600	300	2,700	2,700	S	2,400	1,700	700
Civil/architectural engineers	206,800	132,100	123,500	7,300	1,300	4,200	3,100	1,100	70,500	15,800	54,700
Electrical/related engineers	364,800	308,400	295,200	6,800	6,500	13,300	12,500	900	43,000	36,500	6,600
Industrial engineers	79,700	73,900	71,000	900	2,000	1,600	1,400	200	4,200	3,400	700
Mechanical engineers	271,100	246,500	239,300	5,500	1,600	6,200	6,200	100	18,400	15,400	3,000
Other engineers	269,200	218,800	208,400	6,100	4,300	9,300	8,900	400	41,100	24,300	16,900
Postsecondary teachers-											
engineers	33,900	100	100	S	S	33,600	28,900	4,700	200	200	S

See explanatory notes, if any, and SOURCE at end of table.

Appendix table 3-6.
Employed U.S. scientists and engineers, by highest degree attained, occupation, and employment sector: 1997

Occupation	Business/industry			Educational institution			Government					
	Employed S&Es, total	Total	Profit	Self-employed	Non-profit	Total	4-year college/university	Other	Total	Federal	State/local	
Non-S&E occupations, total	7,216,200	4,921,300	3,784,400	618,000	518,900	1,366,800	464,800	901,900	928,100	324,600	603,600	
Managers/administrators	2,019,900	1,527,000	1,318,800	70,000	138,300	190,000	90,300	99,700	303,000	122,700	180,200	
Health/related	802,400	576,900	355,900	98,400	122,700	158,800	148,200	10,600	66,700	24,800	41,900	
Teachers, except S&E postsecondary	779,100	38,900	20,200	8,900	9,800	728,100	95,700	632,400	12,200	2,000	10,200	
Sales/marketing	920,300	903,000	768,700	115,900	18,400	6,400	3,800	2,600	10,900	2,700	8,200	
Other non-S&E occupations	2,694,500	1,875,600	1,320,900	324,900	229,800	283,600	127,000	156,600	535,300	172,200	363,100	
Bachelor's												
All occupations, total	6,193,700	4,582,200	3,903,100	360,500	318,600	780,800	317,600	463,200	830,700	337,900	492,900	
S&E occupations, total	1,916,800	1,497,700	1,402,900	47,300	47,500	155,800	130,700	25,100	263,300	141,000	122,300	
Scientists, total	1,000,200	740,100	672,100	29,500	38,500	131,200	110,200	21,100	128,900	69,200	59,700	
Computer/math scientists, total	675,300	571,700	531,500	18,600	21,600	41,700	31,100	10,600	61,900	35,500	26,400	
Computer/information scientists	649,900	566,700	526,800	18,600	21,400	27,500	22,100	5,400	55,700	30,400	25,300	
Mathematical scientists	11,900	4,500	4,500	S	S	1,200	1,200	S	6,200	5,000	1,200	
Postsecondary teachers- computer/math scientists	13,500	400	300	S	200	13,100	7,900	5,200	S	S	S	
Life/related scientists, total	125,200	49,300	40,400	4,700	4,200	41,200	36,600	4,600	34,700	18,500	16,200	
Agricultural/food scientists	22,200	14,500	12,500	1,800	200	3,100	3,100	S	4,600	2,600	2,000	
Biological scientists	73,300	30,200	26,200	1,000	3,000	23,700	23,400	300	19,400	8,200	11,200	
Environmental life scientists	14,600	4,000	1,100	1,800	1,100	S	S	S	10,600	7,700	2,900	
Postsecondary teachers- life/related scientists	15,000	500	500	S	S	14,300	10,000	4,300	200	S	200	
Physical/related scientists, total	131,700	87,300	81,800	3,600	1,900	21,900	20,600	1,300	22,400	11,100	11,300	
Chemistry, except biochemistry	70,600	56,500	54,700	800	1,100	5,300	5,300	S	8,800	2,900	5,900	
Earth scientists/ geologists/oceanographers	34,900	24,100	21,100	2,800	200	2,700	2,700	S	8,000	5,500	2,500	
Physicists/astronomers	7,400	3,000	2,700	S	300	3,100	3,100	S	1,300	900	400	
Other physical/related scientists	8,100	3,600	3,300	S	300	200	200	S	4,300	1,800	2,500	
Postsecondary teachers- physical/related scientists	10,700	100	100	S	S	10,600	9,300	1,300	S	S	S	
Social/related scientists, total	68,000	31,800	18,400	2,700	10,700	26,400	21,700	4,600	9,900	4,100	5,800	
Economists	15,900	9,700	7,500	1,500	700	1,700	1,700	S	4,500	2,700	1,800	
Political/related scientists	5,100	1,900	800	S	1,000	900	900	S	2,300	700	1,700	
Psychologists	26,200	15,200	6,900	1,100	7,200	9,800	7,400	2,400	1,200	300	900	
Sociologists/anthropologists	7,000	3,000	2,200	100	700	2,800	2,600	200	1,200	300	900	
Other social/related scientists	4,500	2,000	1,100	S	1,000	1,900	1,700	100	600	200	500	
Postsecondary teachers- social/related scientists	9,300	S	S	S	S	9,300	7,400	1,900	S	S	S	

See explanatory notes, if any, and SOURCE at end of table.

Appendix table 3-6.
Employed U.S. scientists and engineers, by highest degree attained, occupation, and employment sector: 1997

Occupation	Business/industry			Educational institution				Government		State/ Local	
	Employed S&Es, total	Total	Profit employed	Self- employed	Non- profit	Total	4-year college/ university	Other	Total		Federal
Engineers, total	916,600	757,700	730,800	17,800	9,100	24,600	20,600	4,000	134,400	71,800	62,600
Aerospace/related engineers	40,900	32,300	31,700	300	300	1,400	1,400	S	7,200	7,200	S
Chemical engineers	49,300	46,200	45,500	700	S	1,600	1,600	S	1,600	900	700
Civil/architectural engineers	150,500	92,200	86,800	4,600	900	2,800	1,800	1,000	55,500	11,600	43,900
Electrical/related engineers	239,600	204,800	197,700	3,900	3,200	5,500	4,800	800	29,300	24,500	4,800
Industrial engineers	58,700	54,300	52,500	700	1,000	1,000	800	200	3,400	2,700	700
Mechanical engineers	200,300	183,900	178,800	4,200	900	3,200	3,200	S	13,100	10,700	2,500
Other engineers	171,800	143,900	137,800	3,400	2,700	3,800	3,500	400	24,100	14,000	10,000
Postsecondary teachers-engineers ..	5,400	S	S	S	S	5,300	3,600	1,700	200	200	S
Non-S&E occupations, total	4,276,900	3,084,500	2,500,100	313,200	271,100	625,000	186,900	438,100	567,500	196,900	370,600
Managers/administrators	1,141,100	928,600	827,300	38,100	63,200	55,200	33,400	21,800	157,300	64,500	92,800
Health/related	280,400	192,700	118,300	10,200	64,200	56,700	52,400	4,300	31,100	7,100	23,900
Teachers, except S&E	380,700	27,100	14,500	7,400	5,200	347,900	13,900	334,100	5,700	1,400	4,300
Sales/marketing	718,800	703,700	603,800	86,200	13,700	5,600	3,300	2,300	9,500	2,300	7,200
Other non-S&E occupations	1,755,900	1,232,400	936,300	171,300	124,800	159,500	83,900	75,700	364,000	121,600	242,400
Masters											
All occupations, total	2,819,800	1,736,000	1,370,600	150,200	215,200	711,400	219,300	492,100	372,500	157,000	215,500
S&E occupations, total	967,900	657,200	580,800	39,100	37,300	182,500	113,300	69,200	128,200	74,600	53,600
Scientists, total	592,000	357,100	296,400	29,400	31,400	158,800	92,700	66,100	76,100	41,500	34,600
Computer/math scientists, total	301,600	228,400	214,300	5,600	8,500	49,500	29,500	20,000	23,700	15,200	8,500
Computer/information scientists	254,200	219,700	207,300	5,200	7,100	15,700	11,800	3,900	18,800	12,400	6,400
Mathematical scientists	15,900	8,700	6,900	300	1,400	2,300	2,000	300	4,900	2,800	2,100
Postsecondary teachers- computer/math scientists	31,500	100	100	S	S	31,400	15,700	15,800	S	S	S
Life/related scientists, total	70,300	22,500	18,000	1,500	3,000	31,100	23,500	7,600	16,600	8,400	8,200
Agricultural/food scientists	10,900	5,700	4,900	700	S	2,900	2,900	100	2,200	800	1,500
Biological scientists	37,600	14,600	11,800	500	2,300	11,200	11,200	S	11,700	5,800	5,900
Environmental life scientists	4,200	1,400	1,300	100	100	100	100	S	2,600	1,800	800
Postsecondary teachers- life/related scientists	17,600	800	S	200	600	16,800	9,300	7,500	S	S	S
Physical/related scientists, total	69,100	35,600	33,300	1,200	1,100	18,400	13,200	5,200	15,200	9,600	5,600
Chemistry, except biochemistry	20,200	14,700	14,100	300	300	1,700	1,700	S	3,800	1,500	2,300
Earth scientists/ geologists/oceanographers	23,100	14,600	13,800	700	100	2,600	2,500	100	5,900	3,900	2,000
Physicists/astronomers	9,000	4,000	3,300	100	600	3,300	3,300	100	1,600	1,600	S
Other physical/related scientists	7,100	2,200	2,000	100	100	1,100	800	300	3,800	2,600	1,200
Postsecondary teachers- physical/related scientists	9,700	S	S	S	S	9,700	4,900	4,700	100	100	S

See explanatory notes, if any, and SOURCE at end of table.

Appendix table 3-6.
Employed U.S. scientists and engineers, by highest degree attained, occupation, and employment sector: 1997

Occupation	Business/industry				Educational institution				Government	
	Employed S&Es, total	Total	Profit	Self-employed	Non-profit	Total 4-year college/university	Other	Total	Federal	State/Local
Social/related scientists, total	151,100	70,700	30,800	21,100	18,800	59,800	33,300	20,600	8,300	12,300
Economists	21,100	13,700	11,500	1,000	1,300	1,300	S	6,100	4,700	1,400
Political/related scientists	3,200	1,600	800	500	300	300	S	1,200	1,100	100
Psychologists	95,000	51,700	16,800	19,100	15,800	32,800	27,100	10,500	1,100	9,300
Sociologists/anthropologists	5,200	1,300	1,000	400	S	2,200	100	1,700	700	1,000
Other social/related scientists	3,700	2,000	700	100	1,300	1,000	S	700	200	500
Postsecondary teachers- social/related scientists	22,900	200	100	S	100	22,300	6,100	500	500	S
Engineers, total	375,900	300,100	284,400	9,700	5,900	23,700	3,100	52,100	33,000	19,000
Aerospace/related engineers	27,300	20,300	19,400	400	600	1,200	100	5,800	5,700	100
Chemical engineers	19,900	18,800	17,900	700	100	600	S	600	500	S
Civil/architectural engineers	51,700	36,700	33,700	2,600	400	1,000	100	14,100	3,800	10,200
Electrical/related engineers	107,400	89,300	84,200	2,700	2,500	6,400	100	11,600	10,000	1,700
Industrial engineers	19,300	18,100	17,100	200	800	600	S	700	700	S
Mechanical engineers	61,600	55,200	53,600	1,100	500	2,000	100	4,400	3,900	500
Other engineers	79,500	61,800	58,600	2,100	1,100	2,700	S	15,000	8,500	6,500
Postsecondary teachers-engineers	9,300	S	S	S	S	9,300	2,800	S	S	S
Non-S&E occupations, total	1,851,900	1,078,700	789,700	111,100	177,900	528,900	422,900	244,300	82,400	161,900
Managers/administrators	724,800	506,500	420,900	24,900	60,700	93,700	30,100	124,600	48,600	76,000
Health/related	92,500	63,300	36,000	5,500	21,800	17,200	13,300	12,000	4,000	8,000
Teachers, except S&E postsecondary	323,300	10,800	4,900	1,300	4,500	307,500	280,500	5,000	500	4,500
Sales/marketing	183,100	181,100	151,700	24,800	4,600	700	300	1,400	400	1,000
Other non-S&E occupations	528,200	317,100	176,200	54,600	86,300	109,900	35,200	101,200	28,900	72,400
Doctorate										
All occupations, total	696,000	289,100	212,500	38,300	38,300	341,800	39,800	65,100	42,500	22,600
S&E occupations, total	454,700	174,500	134,600	21,200	18,700	235,600	220,900	44,600	32,800	11,800
Scientists, total	375,300	127,200	91,200	19,600	16,400	209,900	14,500	38,100	27,300	10,800
Computer/math scientists, total	59,000	25,600	22,700	1,000	1,800	29,600	2,200	3,800	2,600	1,200
Computer/information scientists	25,700	21,700	20,000	800	900	2,100	300	1,900	1,300	600
Mathematical scientists	6,900	3,500	2,500	200	900	1,500	S	1,900	1,300	600
Postsecondary teachers- computer/math scientists	26,300	300	200	S	100	26,000	1,800	S	S	S
Life/related scientists, total	111,800	27,200	20,800	1,300	5,000	72,500	3,000	12,200	9,900	2,200
Agricultural/food scientists	9,800	4,300	3,600	400	300	3,400	S	2,000	1,700	300
Biological scientists	64,100	22,400	16,900	800	4,700	32,300	900	9,400	7,600	1,700
Environmental life scientists	1,200	300	200	100	100	300	S	600	500	100
Postsecondary teachers- life/related sciences	36,700	100	S	S	100	36,500	2,100	200	100	100

See explanatory notes, if any, and SOURCE at end of table.

Appendix table 3-6.
Employed U.S. scientists and engineers, by highest degree attained, occupation, and employment sector: 1997

Occupation	Business/industry				Educational institution			Government			
	Employed S&Es, total	Total	Profit employed	Self-employed	Non-profit	Total	4-year college/university	Other	Total	Federal	State/local
Physical/related scientists, total	83,700	33,100	29,700	1,300	2,100	39,700	37,300	2,400	10,800	9,500	1,300
Chemistry, except biochemistry	28,900	23,000	21,500	700	800	3,500	3,400	100	2,400	2,000	400
Earth scientists/ geologists/oceanographers	10,500	3,500	2,700	300	500	3,700	3,400	300	3,300	2,900	500
Physicists/astronomers	15,100	5,800	4,700	300	800	4,700	4,700	S	4,600	4,200	400
Other physical/related scientists	1,400	800	800	S	S	100	100	S	500	400	S
Postsecondary teachers-physical/related scientists	27,800	S	S	S	S	27,700	25,700	2,000	S	S	S
Social/related scientists, total	120,800	41,400	18,000	16,000	7,400	68,000	61,200	6,800	11,400	5,300	6,100
Economists	7,800	4,700	3,800	400	500	1,200	1,200	S	1,900	1,500	300
Political/related scientists	900	300	100	S	200	300	300	S	300	300	S
Psychologists	54,300	34,400	13,200	15,200	6,000	12,000	7,900	4,100	7,900	2,600	5,200
Sociologists/anthropologists	3,600	1,200	600	200	400	1,600	1,400	100	800	500	200
Other social/related scientists	2,700	600	300	100	300	1,500	1,200	300	600	400	200
Postsecondary teachers-social/related scientists	51,600	100	S	S	100	51,500	49,200	2,300	S	S	S
Engineers, total	79,400	47,200	43,400	1,600	2,200	25,700	25,500	300	6,500	5,500	1,000
Aerospace/related engineers	4,300	3,000	2,700	100	200	500	500	S	800	800	S
Chemical engineers	7,100	6,300	6,000	100	200	500	500	S	200	200	S
Civil/architectural engineers	4,000	2,700	2,500	200	100	500	500	S	800	300	500
Electrical/related engineers	16,800	13,800	12,700	200	800	1,400	1,400	S	1,600	1,600	100
Industrial engineers	1,400	1,300	1,100	S	100	100	100	S	100	100	S
Mechanical engineers	9,000	7,200	6,700	200	200	1,000	1,000	S	800	700	S
Other engineers	17,700	12,900	11,700	600	600	2,700	2,700	S	2,100	1,700	400
Postsecondary teachers-engineers	19,200	100	100	S	S	19,100	18,800	200	S	S	S
Non-S&E occupations, total	241,300	114,700	77,900	17,100	19,700	106,200	81,100	25,100	20,500	9,700	10,800
Managers/administrators	102,400	55,200	43,200	3,000	9,000	34,000	22,700	11,200	13,300	6,500	6,800
Health/related	21,800	12,700	7,800	2,600	2,300	7,500	7,100	400	1,600	1,100	600
Teachers, except S&E postsecondary	57,900	800	500	100	100	56,500	46,400	10,100	700	200	500
Sales/marketing	8,300	8,200	6,700	1,400	100	100	100	S	S	S	S
Other non-S&E occupations	51,000	37,900	19,700	10,000	8,200	8,200	4,900	3,300	4,900	2,000	2,900

S = suppressed for reasons of confidentiality and/or data reliability

^aIncludes professional degrees.

NOTES: The term "Scientists and Engineers" (S&Es) includes all persons who have ever received a bachelor's degree or higher in a science or engineering (S&E) field, plus persons holding a non-S&E bachelor's or higher degree who were employed in a S&E occupation during either the 1993, 1995 or 1997 SESTAT surveys. Figures are rounded to nearest hundred. Details may not add to total because of rounding.

SOURCE: National Science Foundation, Division of Science Resources Studies (NSF/SRS), Scientists and Engineers Statistical Data System (SESTAT), 1997.

See text table 3-4 in Volume 1.

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Science & Engineering Indicators – 2000

Appendix table 3-7.

Median annual salaries of U.S. scientists and engineers, by occupation and highest degree attained: 1997
(Dollars)

Occupation	Employed S&Es, total	Level of highest degree			
		Bachelor's	Master's	Doctorate	Professional
All occupations, total	50,000	45,000	53,000	63,000	90,000
S&E occupations, total	55,000	52,000	59,000	62,000	80,000
Scientists, total	52,000	50,000	54,000	60,000	86,000
Computer/math scientists, total	56,000	54,000	60,000	65,000	67,000
Computer/information scientists	56,000	54,000	62,000	74,900	S
Mathematical scientists	59,800	52,500	60,000	70,000	S
Postsecondary teachers-computer/ math scientists	45,000	27,000	35,000	55,000	S
Life/related scientists, total	44,000	36,000	42,000	57,500	120,000
Agricultural/food scientists	41,000	37,000	40,000	60,000	S
Biological scientists	41,000	35,000	42,000	55,000	120,000
Environmental life scientists	45,000	41,000	52,000	59,000	S
Postsecondary teachers-life/related scientists ..	52,000	28,000	37,500	58,000	110,000
Physical/related scientists, total	50,000	42,000	51,000	65,000	S
Chemistry, except biochemistry	48,500	41,300	50,000	70,000	S
Earth scientists/geologists/oceanographers	50,000	46,500	53,000	62,000	S
Physicists/astronomers	63,000	42,000	58,000	73,000	S
Other physical/related scientists	45,000	37,500	50,000	77,800	S
Postsecondary teachers-physical/related scientists	50,000	14,500	41,000	55,000	S
Social/related scientists, total	45,000	25,000	41,100	54,000	53,000
Economists	57,000	45,000	62,500	73,000	S
Political/related scientists	32,000	30,000	36,000	75,000	S
Psychologists	40,000	22,000	40,000	55,000	45,000
Sociologists/anthropologists	30,000	20,000	33,500	50,900	S
Other social/related scientists	50,000	S	S	52,400	S
Postsecondary teachers-social/related scientists	49,000	S	38,000	51,600	S
Engineers, total	60,000	55,000	63,600	72,000	S
Aerospace/related engineers	65,000	61,000	68,000	78,500	S
Chemical engineers	65,000	62,000	70,000	72,100	S
Civil/architectural engineers	53,100	51,000	60,000	68,000	S
Electrical/related engineers	61,500	60,000	69,000	79,000	S
Industrial engineers	53,000	52,000	58,000	72,000	S
Mechanical engineers	58,000	55,000	60,000	72,100	S
Other engineers	59,200	55,000	62,000	71,200	S
Postsecondary teachers-engineers	60,000	35,000	48,000	65,000	S
Non-S&E occupations, total	46,000	40,000	50,000	65,000	90,000
Managers/administrators	62,000	56,000	68,000	83,500	74,400
Health/related	57,500	37,000	41,400	75,000	110,000
Teachers, except S&E postsecondary	36,000	29,500	41,000	52,000	52,000
Social service/related	31,000	27,000	37,000	40,000	35,000
Technology/technical	44,000	42,000	52,000	60,000	S
Sales/marketing	45,000	42,000	60,000	70,000	45,000
Art, humanities and related	40,000	36,000	45,000	44,000	S
Other non-S&E occupations	37,000	30,000	39,000	60,000	80,000

S = suppressed for reasons of confidentiality and/or data reliability

NOTES: The term "Scientists and Engineers" (S&Es) includes all people who have ever received a bachelor's degree or higher in an S&E field, plus persons holding a non-S&E bachelor's or higher degree who were employed in an S&E occupation during the 1993, 1995, or 1997 SESTAT surveys. Figures are rounded to nearest hundred. Details may not add to total because of rounding.

SOURCE: National Science Foundation, Division of Science Resources Studies (NSF/SRS), Scientists and Engineers Statistical Data System (SESTAT), 1997.

See page 3-8 in Volume 1.

Science & Engineering Indicators – 2000

Appendix table 3-8.

Median annual salaries of U.S. scientists and engineers, by highest degree attained, occupation, sex, and years since degree: 1997

Highest degree, occupation and sex	Employed S&Es, total	Years since degree							
		<5 years	5-9 years	10-14 years	15-19 years	20-24 years	25-29 years	30-34 years	35+ years
All degree levels^a									
All occupations, total	50,000	33,100	45,000	53,000	58,000	58,000	58,000	62,000	60,000
Male	58,000	42,000	52,000	60,000	64,000	65,000	68,000	70,000	65,000
Female	39,000	29,000	39,000	45,000	45,000	45,000	41,200	43,000	40,000
S&E occupations, total	55,000	40,000	50,000	58,000	62,000	63,000	66,000	67,000	63,000
Male	58,000	42,000	52,000	60,000	64,000	65,000	68,000	70,000	65,000
Female	47,000	35,000	47,000	51,000	52,400	52,000	55,000	50,000	55,000
Scientists, total	52,000	37,400	48,000	55,000	59,000	59,500	62,000	62,000	62,000
Male	55,000	40,000	50,000	59,600	61,000	60,500	63,000	65,000	67,300
Female	45,000	33,100	44,000	50,000	51,000	52,000	55,000	50,000	52,000
Computer/math scientists, total	56,000	46,000	53,000	60,000	60,100	61,000	64,000	63,300	58,000
Male	58,200	47,500	55,000	60,000	62,000	65,000	65,000	65,000	60,000
Female	51,000	42,000	50,000	53,000	55,500	53,000	60,000	57,000	S
Life/related scientists, total	44,000	27,000	38,000	49,000	51,000	53,000	56,700	56,000	67,300
Male	48,500	27,500	40,000	50,000	57,000	55,000	61,000	60,000	69,000
Female	37,000	27,000	36,000	43,700	44,500	50,000	45,000	42,000	S
Physical/related scientists, total	50,000	32,000	43,000	53,000	59,100	60,000	60,000	70,000	68,000
Male	52,000	33,000	44,000	54,000	62,000	63,400	60,000	72,000	73,000
Female	41,000	31,000	40,000	48,000	51,000	52,000	52,200	49,200	S
Social/related scientists, total	45,000	30,000	40,000	50,000	52,000	52,000	60,000	60,000	55,000
Male	50,000	32,000	40,000	55,000	57,500	55,000	60,000	65,000	78,000
Female	38,000	30,000	38,000	46,000	47,500	50,000	55,000	58,600	S
Engineers, total	60,000	44,000	53,300	60,000	65,000	68,000	70,000	71,000	64,000
Male	60,000	45,000	54,000	60,000	65,000	68,600	70,000	71,500	64,500
Female	50,000	42,000	52,000	55,400	60,000	60,000	60,100	S	S
Non-S&E occupations, total	46,000	30,000	40,000	50,000	54,000	55,000	52,000	58,000	57,000
Male	52,500	32,000	45,000	55,000	62,000	60,000	60,000	66,400	60,000
Female	36,000	28,000	36,000	43,000	42,000	42,600	39,900	41,000	40,000
Managers/administrators	62,000	42,000	53,000	60,000	65,900	67,000	72,000	80,000	72,000
Male	69,500	48,000	60,000	63,000	72,000	71,000	77,000	84,200	75,000
Female	50,000	36,600	45,000	50,000	55,000	55,000	51,000	50,000	48,000
Other non-S&E occupations	40,000	28,000	37,700	45,000	46,000	48,000	46,000	50,000	50,000
Male	45,000	30,000	41,000	50,000	52,000	52,000	50,000	54,000	54,000
Female	33,100	26,000	34,000	40,000	39,000	38,000	36,500	39,900	37,700

See explanatory notes, if any, and SOURCE at end of table.

Appendix table 3-8.

Median annual salaries of U.S. scientists and engineers, by highest degree attained, occupation, sex, and years since degree: 1997

Highest degree, occupation and sex	Employed S&Es, total	Years since degree							
		<5 years	5–9 years	10–14 years	15–19 years	20–24 years	25–29 years	30–34 years	35+ years
Bachelor's									
All occupations, total	45,000	28,800	40,000	50,000	52,000	50,000	53,000	57,000	55,000
Male	50,000	32,000	44,000	52,000	58,000	55,000	59,000	63,000	60,000
Female	34,000	25,000	33,000	41,500	40,000	39,000	39,000	42,000	40,000
S&E occupations, total	52,000	37,000	48,000	55,000	60,000	60,000	62,400	65,000	60,000
Male	55,000	39,000	49,000	56,000	60,000	61,000	65,000	65,200	60,000
Female	45,000	33,300	45,000	50,000	52,000	50,000	54,000	49,900	56,000
Scientists, total	50,000	34,000	45,000	53,000	55,000	55,000	58,000	56,000	55,000
Male	52,000	36,000	46,000	55,000	58,200	58,000	59,000	60,000	55,000
Female	43,400	29,500	40,800	50,000	48,500	50,000	52,000	49,400	55,000
Computer/math scientists,									
total	54,000	41,000	50,000	55,000	59,000	59,000	62,000	60,000	57,000
Male	55,000	42,000	50,000	58,000	60,000	60,500	62,000	60,700	55,000
Female	50,000	38,000	48,000	51,800	52,000	50,000	60,000	59,000	S
Life/related scientists,									
total	36,000	22,000	31,000	40,000	42,000	46,000	43,000	48,500	S
Male	40,000	22,000	30,000	42,000	40,900	44,000	43,000	S	S
Female	32,000	21,000	31,700	35,000	43,000	S	S	S	S
Physical/related scientists,									
total	42,000	27,300	37,000	44,000	52,000	52,000	54,000	57,000	52,000
Male	45,000	27,800	37,000	45,000	52,000	55,000	55,000	64,000	65,000
Female	37,000	26,000	37,000	42,000	48,000	47,000	S	S	S
Social/related scientists,									
total	25,000	21,000	25,000	S	S	S	S	S	S
Male	25,000	20,000	S	S	S	S	S	S	S
Female	25,000	22,500	S	S	S	S	S	S	S
Engineers, total	55,000	40,000	50,000	56,000	62,300	65,000	68,000	70,000	62,000
Male	57,000	40,000	50,000	57,000	63,000	65,000	68,000	70,000	62,000
Female	49,500	40,000	49,000	53,200	60,000	55,000	S	S	S
Non-S&E occupations,									
total	40,000	25,000	35,000	44,000	46,000	47,000	50,000	51,000	50,000
Male	45,000	28,000	38,000	48,000	52,000	50,000	54,000	60,000	58,000
Female	31,200	24,000	30,000	37,500	37,000	37,000	36,400	40,800	39,000
Managers/administrators	56,000	33,000	44,000	52,000	60,000	60,000	70,000	75,000	70,000
Male	63,000	35,000	50,000	60,000	66,600	63,000	72,000	80,100	75,000
Female	43,000	30,000	38,000	45,000	50,000	52,500	52,000	50,000	44,000
Other non-S&E occupations	35,000	25,000	32,400	38,900	40,000	40,000	40,000	44,000	41,000
Male	40,000	27,000	35,500	42,000	44,000	44,000	45,000	49,000	48,000
Female	29,000	23,000	30,000	35,000	35,000	33,300	33,000	38,000	37,000

See explanatory notes, if any, and SOURCE at end of table.

Appendix table 3-8.

Median annual salaries of U.S. scientists and engineers, by highest degree attained, occupation, sex, and years since degree: 1997

Highest degree, occupation and sex	Employed S&Es, total	Years since degree							
		<5 years	5-9 years	10-14 years	15-19 years	20-24 years	25-29 years	30-34 years	35+ years
Master's									
All occupations, total	53,000	42,000	52,000	56,000	60,000	60,000	58,000	62,000	60,000
Male	60,000	49,000	57,000	61,900	65,000	67,000	62,000	70,000	70,000
Female	43,000	35,000	45,000	46,300	47,000	50,000	45,000	44,000	35,000
S&E occupations, total	59,000	47,500	57,000	63,000	65,000	65,300	69,000	67,700	69,000
Male	60,000	50,000	59,000	65,000	67,500	69,500	70,000	70,000	72,100
Female	48,000	38,000	50,000	53,000	50,000	52,000	55,000	50,000	S
Scientists, total	54,000	43,000	52,000	60,000	60,000	59,900	61,000	60,000	67,300
Male	58,000	48,000	55,000	63,000	65,000	62,000	62,000	65,000	70,000
Female	46,000	35,000	47,000	50,000	50,000	52,000	56,900	50,000	S
Computer/math scientists, total	60,000	52,000	60,000	67,000	65,000	66,000	70,000	63,500	S
Male	62,500	53,000	60,000	69,000	67,000	68,000	70,000	65,000	S
Female	56,000	50,000	54,600	63,000	60,000	60,000	67,000	S	S
Life/related scientists, total	42,000	31,000	36,400	43,800	47,000	52,000	52,000	S	S
Male	44,500	31,000	36,400	44,000	51,000	52,000	55,000	S	S
Female	38,000	34,000	37,000	43,800	41,000	S	S	S	S
Physical/related scientists, total	51,000	35,000	46,000	57,600	61,600	60,000	52,200	70,000	S
Male	52,000	35,000	48,000	56,000	66,600	62,000	50,000	70,000	S
Female	47,000	36,000	43,000	62,700	S	S	S	S	S
Social/related scientists, total	41,100	30,000	37,000	46,000	47,500	48,000	54,000	60,000	S
Male	46,000	33,500	40,000	52,200	52,000	48,000	53,000	S	S
Female	37,000	30,000	36,000	44,200	46,000	45,000	S	S	S
Engineers, total	63,600	50,000	60,000	68,900	70,000	74,000	75,000	78,500	76,500
Male	65,000	51,000	60,000	68,900	70,000	74,000	75,000	78,500	83,000
Female	55,000	49,000	56,000	70,000	62,700	S	S	S	S
Non-S&E occupations, total	50,000	38,000	50,000	50,000	54,000	58,500	52,200	60,000	55,000
Male	59,000	45,000	54,500	58,500	62,000	65,000	58,000	65,000	60,000
Female	42,000	34,000	43,200	45,000	46,500	48,000	43,500	42,000	35,000
Managers/administrators	68,000	55,000	65,000	65,000	69,000	77,000	75,000	87,000	80,000
Male	75,000	60,000	71,000	72,000	75,000	80,000	83,900	96,000	80,000
Female	55,900	45,000	60,000	58,000	60,000	65,000	44,000	S	S
Other non-S&E occupations	42,000	34,000	41,600	43,000	45,000	46,500	48,000	46,000	36,000
Male	46,400	38,000	45,000	47,000	47,000	50,000	50,000	46,000	43,000
Female	38,800	32,000	39,000	40,000	42,000	41,200	43,500	43,000	31,000

See explanatory notes, if any, and SOURCE at end of table.

Appendix table 3-8.

Median annual salaries of U.S. scientists and engineers, by highest degree attained, occupation, sex, and years since degree: 1997

Highest degree, occupation and sex	Employed S&Es, total	Years since degree							
		<5 years	5–9 years	10–14 years	15–19 years	20–24 years	25–29 years	30–34 years	35+ years
Doctorate									
All occupations, total	63,000	42,500	56,000	62,000	70,000	74,100	76,000	80,000	79,000
Male	67,000	48,000	60,000	65,000	71,600	75,000	78,500	80,100	80,000
Female	50,000	38,000	50,000	57,000	60,000	63,000	60,000	60,000	62,000
S&E occupations, total	62,000	43,600	56,000	62,000	70,000	71,700	73,300	78,000	79,000
Male	65,000	48,000	59,000	65,000	70,200	73,000	75,000	78,000	80,000
Female	50,000	37,000	50,000	56,000	59,000	63,000	60,000	65,700	60,000
Scientists, total	60,000	40,000	52,000	60,000	66,000	69,000	70,000	75,000	78,000
Male	62,000	42,000	54,000	62,000	70,000	70,000	71,000	75,000	79,000
Female	50,000	36,000	49,900	55,000	59,000	62,500	60,000	65,700	60,000
Computer/math scientists, total	65,000	55,000	65,000	65,000	70,000	69,000	69,000	70,000	76,400
Male	67,000	56,000	67,300	66,000	72,600	70,000	69,100	70,000	76,400
Female	57,000	45,000	60,000	60,000	63,000	56,000	56,700	S	S
Life/related scientists, total	57,500	30,000	50,000	60,000	66,900	68,100	72,000	75,000	78,000
Male	60,000	32,000	52,000	62,000	68,000	70,000	75,000	75,000	78,000
Female	48,000	30,000	49,500	57,000	59,900	60,000	60,000	80,000	S
Physical/related scientists, total	65,000	44,500	55,000	65,000	74,900	75,000	75,000	80,000	80,000
Male	66,900	45,000	55,000	65,400	75,000	76,000	75,000	80,100	80,500
Female	54,300	40,000	54,000	58,000	59,000	68,000	66,000	S	S
Social/related scientists, total	54,000	40,000	48,500	57,000	60,000	63,000	65,000	70,000	72,100
Male	58,000	41,000	50,000	58,000	62,000	63,000	67,000	70,000	74,900
Female	48,000	38,000	47,800	53,000	57,500	64,000	60,000	64,000	S
Engineers, total	72,000	60,000	68,500	74,000	80,000	85,000	85,000	85,000	83,000
Male	72,100	60,000	69,000	73,000	80,000	85,000	85,000	85,000	83,000
Female	60,000	52,000	61,000	75,000	80,000	S	S	S	S
Non-S&E occupations, total	65,000	41,000	59,000	65,000	70,000	77,700	87,000	94,000	78,000
Male	72,000	45,000	60,400	68,000	72,100	82,000	90,000	98,000	80,000
Female	52,000	40,000	51,000	59,300	65,000	61,000	62,000	35,000	S
Managers/administrators	83,500	60,000	72,000	80,100	85,000	90,000	97,200	105,000	90,000
Male	86,200	65,000	72,000	84,000	90,000	90,000	98,000	110,000	90,000
Female	70,800	46,000	80,000	77,100	77,900	70,000	77,000	70,000	S
Other non-S&E occupations	52,300	37,000	50,000	53,000	58,000	65,000	75,000	73,000	62,500
Male	60,000	38,000	53,000	53,000	58,000	70,000	75,600	80,000	62,500
Female	45,000	37,000	45,000	52,000	57,600	58,000	46,000	S	S

S = suppressed for reasons of confidentiality and/or data reliability

^aIncludes professional degrees.

NOTES: The term "Scientists and Engineers" (S&Es) includes all people who have ever received a bachelor's degree or higher in an S&E field, plus people holding a non-S&E bachelor's or higher degree who were employed in an S&E occupation during the 1993, 1995, or 1997 SESTAT surveys. Figures are rounded to nearest hundred. Details may not add to total because of rounding.

SOURCE: National Science Foundation, Division of Science Resources Studies (NSF/SRS), Scientists and Engineers Statistical Data System (SESTAT), 1997.

See page 3-8 and figures 3-5 and 3-10 in Volume 1.

Appendix table 3-9.

Employed U.S. scientists and engineers, by highest degree attained, occupation, sex, and years since degree: 1997

Occupation and sex	Employed S&Es, total	Years since degree							
		<5 years	5-9 years	10-14 years	15-19 years	20-24 years	25-29 years	30-34 years	35+ years
All degree levels^a									
All occupations, total	10,585,600	1,892,900	1,742,500	1,726,000	1,616,600	1,548,200	1,033,900	523,600	501,800
Male	7,037,600	1,033,700	1,067,800	1,108,700	1,091,200	1,111,600	794,100	412,200	418,500
Female	3,548,000	859,200	674,800	617,300	525,400	436,600	239,900	111,500	83,300
S&E occupations, total	3,369,400	679,300	624,800	610,300	499,400	391,500	275,600	152,300	136,200
Male	2,606,100	474,400	457,900	463,200	387,800	321,200	241,700	134,800	125,100
Female	763,300	204,900	166,900	147,200	111,500	70,300	33,800	17,500	11,200
Scientists, total	1,995,100	428,100	383,000	363,400	292,600	239,300	156,700	76,800	55,100
Male	1,355,400	262,900	249,800	242,200	196,400	173,400	125,000	60,300	45,400
Female	639,600	165,100	133,200	121,200	96,300	66,000	31,700	16,500	9,700
Computer/math scientists, ... total	1,039,500	190,400	211,700	220,000	156,800	125,100	81,700	35,300	18,600
Male	758,600	141,400	151,100	157,600	113,300	91,000	62,900	26,800	14,500
Female	280,900	49,000	60,600	62,400	43,400	34,100	18,800	8,500	4,100
Life/related scientists, total ..	321,800	73,100	62,900	45,300	46,600	40,100	25,900	15,700	12,200
Male	205,900	38,500	35,700	27,500	28,200	31,300	21,800	12,000	10,900
Female	115,900	34,600	27,200	17,800	18,400	8,800	4,100	3,600	1,300
Physical/related scientists, total	284,900	62,600	52,300	43,500	39,000	29,500	26,900	14,700	16,200
Male	223,100	43,100	39,100	33,300	32,100	23,500	24,100	13,300	14,600
Female	61,800	19,600	13,200	10,300	6,900	6,000	2,800	1,400	1,600
Social/related scientists,									
total	349,000	101,900	56,100	54,600	50,300	44,600	22,200	11,100	8,000
Male	167,900	39,900	23,900	23,800	22,800	27,600	16,300	8,200	5,400
Female	181,100	62,000	32,200	30,800	27,500	17,000	6,000	2,900	2,600
Engineers, total	1,374,400	251,200	241,800	246,900	206,800	152,200	118,800	75,500	81,200
Male	1,250,700	211,500	208,100	221,000	191,500	147,800	116,700	74,400	79,700
Female	123,700	39,800	33,700	25,900	15,300	4,400	2,100	1,000	1,500
Non-S&E occupations, total ..	7,216,200	1,213,600	1,117,700	1,115,700	1,117,200	1,156,700	758,300	371,400	365,500
Male	4,431,500	559,300	609,800	645,600	703,400	790,300	552,300	277,400	293,400
Female	2,784,700	654,300	507,900	470,100	413,900	366,300	206,000	94,000	72,200
Managers/administrators	2,019,900	189,500	257,900	329,400	353,000	390,100	258,700	130,200	111,100
Male	1,453,100	111,100	153,400	218,000	253,100	295,600	215,600	108,000	98,400
Female	566,800	78,400	104,500	111,500	99,900	94,500	43,100	22,200	12,700
Other non-S&E occupations	5,196,300	1,024,100	859,800	786,300	764,200	766,600	499,700	241,200	254,400
Male	2,978,400	448,200	456,400	427,600	450,300	494,700	336,800	169,400	195,000
Female	2,217,900	575,900	403,400	358,600	313,900	271,800	162,900	71,800	59,400
Bachelor's									
All occupations, total	6,193,700	1,117,100	990,900	975,500	900,100	889,500	628,000	332,700	359,800
Male	4,056,500	596,300	600,400	642,500	601,900	616,300	460,700	247,600	290,900
Female	2,137,200	520,800	390,500	333,000	298,300	273,200	167,400	85,100	68,900
S&E occupations, total	1,916,800	344,100	347,800	376,200	295,300	215,000	152,500	89,700	96,200
Male	1,521,800	245,200	261,400	294,600	237,100	179,600	135,400	79,300	89,200
Female	395,000	98,900	86,400	81,600	58,100	35,400	17,100	10,400	7,000
Scientists, total	1,000,200	200,400	197,200	199,200	147,700	118,100	73,300	36,000	28,300
Male	688,400	126,800	131,900	136,100	101,500	85,600	57,800	26,400	22,200
Female	311,800	73,600	65,300	63,100	46,200	32,400	15,400	9,600	6,100
Computer/math scientists, total	675,300	102,700	132,100	159,300	104,400	86,100	53,400	24,200	13,200
Male	487,900	77,700	92,100	112,200	74,700	63,400	41,100	17,300	9,400
Female	187,400	25,000	40,000	47,100	29,700	22,700	12,300	6,800	3,800
Life/related scientists, total	125,200	32,700	26,300	14,900	17,800	14,200	8,100	6,600	4,700
Male	74,300	16,200	14,600	7,700	8,700	11,200	6,800	5,100	4,100
Female	50,900	16,500	11,800	7,200	9,100	3,000	1,300	1,500	600
Physical/related scientists, total	131,700	31,400	25,900	19,400	19,700	11,500	10,200	4,700	8,900
Male	97,100	20,100	19,200	14,000	16,000	7,400	9,000	3,800	7,600
Female	34,600	11,300	6,700	5,400	3,700	4,100	1,100	900	1,300

See explanatory notes, if any, and SOURCE at end of table.

Appendix table 3-9.

Employed U.S. scientists and engineers, by highest degree attained, occupation, sex, and years since degree: 1997

Occupation and sex	Employed S&Es, total	Years since degree							
		<5 years	5–9 years	10–14 years	15–19 years	20–24 years	25–29 years	30–34 years	35+ years
Social/related scientists,									
total	68,000	33,700	12,900	5,700	5,800	6,200	1,700	600	1,500
Male	29,100	12,900	6,000	2,200	2,100	3,700	1,000	100	1,100
Female	38,900	20,800	6,900	3,500	3,700	2,500	700	500	300
Engineers, total	916,600	143,700	150,500	177,000	147,600	96,900	79,200	53,700	67,900
Male	833,400	118,400	129,400	158,500	135,600	94,000	77,500	53,000	67,000
Female	83,200	25,300	21,100	18,500	12,000	3,000	1,700	800	900
Non-S&E occupations,									
total	4,276,900	773,000	643,100	599,300	604,900	674,500	475,500	243,000	263,600
Male	2,534,700	351,000	339,100	347,900	364,700	436,700	325,300	168,300	201,600
Female	1,742,200	421,900	304,100	251,400	240,100	237,900	150,200	74,700	61,900
Managers/administrators	1,141,100	88,700	125,700	178,900	187,700	225,200	158,700	88,600	87,700
Male	808,500	47,200	70,600	120,800	135,500	160,900	127,000	70,200	76,200
Female	332,600	41,400	55,100	58,100	52,200	64,300	31,700	18,400	11,400
Other non-S&E occupations	3,135,800	684,300	517,400	420,400	417,200	449,400	316,900	154,400	175,900
Male	1,726,200	303,800	268,400	227,100	229,300	275,800	198,300	98,100	125,400
Female	1,409,600	380,500	249,000	193,300	187,900	173,600	118,600	56,300	50,500
Master's									
All occupations, total	2,819,800	543,700	501,400	474,400	450,600	413,000	260,300	110,800	65,600
Male	1,800,500	298,900	302,200	281,300	284,900	289,700	199,700	88,700	55,000
Female	1,019,300	244,800	199,200	193,100	165,600	123,400	60,600	22,100	10,600
S&E occupations, total	967,900	238,900	194,000	157,900	135,600	115,100	70,200	35,600	20,700
Male	715,300	166,600	139,900	113,300	98,900	90,400	58,700	30,200	17,500
Female	252,600	72,300	54,100	44,700	36,700	24,700	11,500	5,300	3,200
Scientists, total	592,000	150,100	118,400	98,500	85,800	69,200	40,600	19,000	10,400
Male	374,400	90,300	75,100	60,300	52,000	45,600	29,400	13,900	7,700
Female	217,600	59,800	43,300	38,200	33,800	23,500	11,100	5,100	2,700
Computer/math scientists,									
total	301,600	73,600	68,700	51,800	43,600	31,400	20,500	8,300	3,800
Male	219,300	53,400	50,700	37,600	32,000	20,600	14,600	6,800	3,500
Female	82,300	20,200	18,000	14,200	11,600	10,700	5,800	1,500	300
Life/related scientists,									
total	70,300	17,100	14,500	10,400	10,700	9,300	4,700	2,500	1,000
Male	40,000	8,500	7,300	6,100	5,900	7,200	3,400	1,000	600
Female	30,300	8,600	7,300	4,400	4,800	2,100	1,200	1,400	500
Physical/related scientists,									
total	69,100	16,900	13,000	10,900	8,500	7,800	6,400	3,400	2,200
Male	52,600	11,600	9,300	8,100	6,500	6,600	5,400	2,900	2,100
Female	16,500	5,300	3,700	2,800	2,000	1,200	1,100	400	100
Social/related scientists,									
total	151,100	42,500	22,200	25,400	23,000	20,600	9,000	4,800	3,400
Male	62,500	16,700	7,900	8,600	7,600	11,100	6,000	3,100	1,600
Female	88,600	25,800	14,400	16,900	15,400	9,500	3,000	1,700	1,800
Engineers, total	375,900	88,800	75,600	59,400	49,700	45,900	29,600	16,600	10,300
Male	340,900	76,300	64,700	53,000	46,800	44,800	29,200	16,300	9,700
Female	34,900	12,400	10,800	6,400	2,900	1,200	400	300	500
Non-S&E occupations,									
total	1,851,900	304,900	307,400	316,400	315,000	298,000	190,100	75,200	44,900
Male	1,085,200	132,300	162,300	168,000	186,100	199,300	141,100	58,500	37,600
Female	766,700	172,500	145,000	148,400	128,900	98,700	49,100	16,700	7,300
Managers/administrators	724,800	84,900	116,200	125,400	134,200	136,600	77,200	33,600	16,800
Male	522,400	53,100	71,800	80,100	94,700	110,100	66,800	30,200	15,700
Female	202,400	31,800	44,400	45,400	39,500	26,400	10,400	3,400	1,200
Other non-S&E occupations	1,127,100	220,000	191,200	191,000	180,800	161,400	112,900	41,600	28,100
Male	562,800	79,200	90,600	88,000	91,400	89,200	74,300	28,300	21,900
Female	564,300	140,800	100,700	103,100	89,400	72,300	38,600	13,400	6,200

See explanatory notes, if any, and SOURCE at end of table.

Appendix table 3-9.

Employed U.S. scientists and engineers, by highest degree attained, occupation, sex, and years since degree: 1997

Occupation and sex	Employed S&Es, total	Years since degree							
		<5 years	5–9 years	10–14 years	15–19 years	20–24 years	25–29 years	30–34 years	35+ years
Doctorate									
All occupations, total	696,000	127,900	116,300	108,600	99,400	93,400	85,300	39,500	25,600
Male	528,000	81,400	78,800	76,400	75,100	77,800	77,400	36,900	24,300
Female	168,000	46,500	37,600	32,200	24,400	15,600	7,900	2,600	1,200
S&E occupations, total	454,700	92,500	80,900	70,100	61,800	56,000	51,600	25,400	16,400
Male	348,300	60,400	56,000	50,900	47,800	47,300	46,500	23,800	15,700
Female	106,400	32,100	24,900	19,200	14,000	8,800	5,100	1,600	800
Scientists, total	375,300	74,200	65,400	60,000	53,100	46,800	41,700	20,200	13,800
Male	274,200	44,200	42,200	41,600	39,500	38,300	36,700	18,700	13,100
Female	101,000	30,000	23,200	18,300	13,600	8,500	5,000	1,600	800
Computer/math scientists, ... total	59,000	12,400	10,700	8,200	8,000	7,400	7,800	2,800	1,600
Male	48,500	9,100	8,100	7,000	5,900	6,800	7,200	2,700	1,600
Female	10,500	3,300	2,500	1,200	2,100	700	600	100	S
Life/related scientists, total ..	111,800	22,900	21,400	17,400	15,500	12,900	11,900	5,700	4,100
Male	80,600	13,600	13,500	11,900	11,900	10,300	10,400	5,200	3,800
Female	31,200	9,300	7,900	5,500	3,600	2,700	1,500	500	300
Physical/related scientists, total	83,700	14,100	13,500	13,200	10,600	10,100	10,300	6,700	5,100
Male	73,000	11,200	10,600	11,200	9,400	9,400	9,700	6,500	4,900
Female	10,700	3,000	2,800	2,000	1,200	700	600	200	200
Social/related scientists, total	120,800	24,800	19,900	21,200	19,000	16,400	11,600	5,000	3,000
Male	72,200	10,400	9,900	11,500	12,200	11,800	9,400	4,300	2,700
Female	48,600	14,400	10,000	9,600	6,800	4,500	2,200	700	300
Engineers, total	79,400	18,300	15,500	10,100	8,700	9,200	9,900	5,100	2,600
Male	74,100	16,200	13,800	9,200	8,300	9,000	9,900	5,100	2,600
Female	5,300	2,100	1,700	900	400	200	100	S	S
Non-S&E occupations, total ..	241,300	35,500	35,400	38,500	37,600	37,400	33,700	14,100	9,100
Male	179,700	21,000	22,800	25,500	27,300	30,500	30,800	13,100	8,700
Female	61,700	14,500	12,700	13,000	10,400	6,900	2,800	1,000	500
Managers/administrators	102,400	9,800	12,300	14,500	18,600	21,000	16,800	6,200	3,100
Male	83,200	7,100	7,800	10,800	14,200	18,500	15,800	5,900	3,000
Female	19,200	2,700	4,400	3,700	4,300	2,600	1,000	300	100
Other non-S&E occupations	138,900	25,600	23,200	24,000	19,100	16,400	16,800	7,900	6,000
Male	96,500	13,900	14,900	14,700	13,000	12,100	15,000	7,200	5,700
Female	42,400	11,800	8,200	9,200	6,000	4,300	1,900	700	300

S = Suppressed for reasons of confidentiality and/or data reliability

^aIncludes professional degrees.

NOTES: The term "Scientists and Engineers" (S&Es) includes all persons who have ever received a bachelor's degree or higher in a science or engineering (S&E) field, plus persons holding a non-S&E bachelor's or higher degree who were employed in a S&E occupation during either the 1993, 1995 or 1997 SESTAT surveys. Figures are rounded to nearest hundred. Details may not add to total because of rounding.

SOURCE: National Science Foundation, Division of Science Resources Studies (NSF/SRS), Scientists and Engineers Statistical Data System (SESTAT), 1997.

See p. 3–10 in Volume 1.

Appendix table 3-10.

Employed U.S. scientists and engineers, by highest degree attained, occupation, sex, and race or ethnicity: 1997

Highest degree and occupation	Employed S&Es, total	Sex		Race/ethnicity				
		Male	Female	White	Black	Hispanic	Asian	Other
All degree levels^a								
All occupations, total	10,585,600	7,037,600	3,548,000	8,877,500	555,600	371,500	745,600	35,400
S&E occupations, total	3,369,400	2,606,100	763,300	2,791,900	113,000	103,500	349,800	11,300
Scientists, total	1,995,200	1,355,500	639,700	1,654,600	77,500	55,800	200,100	7,200
Computer/math scientists, total	1,039,500	758,600	280,900	839,400	44,900	26,200	126,600	2,500
Life/related scientists, total	321,800	205,900	115,900	272,400	7,700	8,000	32,300	1,400
Physical/related scientists, total	284,900	223,100	61,800	240,200	8,400	7,200	27,900	1,200
Social/related scientists, total	349,000	167,900	181,100	302,600	16,500	14,400	13,300	2,100
Engineers, total	1,374,400	1,250,700	123,700	1,137,300	35,400	47,700	149,700	4,200
Non-S&E occupations, total	7,216,200	4,431,500	2,784,700	6,085,600	442,600	268,000	395,800	24,100
Managers/administrators	2,019,900	1,453,100	566,800	1,735,100	112,900	64,000	102,500	5,400
Other non-S&E occupations	5,196,300	2,978,400	2,217,900	4,350,500	329,700	204,000	293,400	18,700
Bachelor's								
All occupations, total	6,193,700	4,056,500	2,137,200	5,212,700	345,000	237,700	374,900	23,400
S&E occupations, total	1,916,800	1,521,800	395,000	1,631,800	72,600	62,200	143,200	7,000
Scientists, total	1,000,200	688,400	311,800	846,300	46,200	29,400	74,200	4,000
Computer/math scientists, total	675,300	487,900	187,400	566,600	33,100	18,100	55,800	1,700
Life/related scientists, total	125,200	74,300	50,900	110,000	3,000	3,300	8,000	900
Physical/related scientists, total	131,700	97,100	34,600	114,000	5,500	3,900	7,900	400
Social/related scientists, total	68,000	29,100	38,900	55,800	4,600	4,200	2,500	900
Engineers, total	916,600	833,400	83,200	785,600	26,300	32,800	68,900	3,000
Non-S&E occupations, total	4,276,900	2,534,700	1,742,200	3,580,900	272,400	175,500	231,700	16,400
Managers/administrators	1,141,100	808,500	332,600	990,500	58,500	38,900	49,800	3,400
Other non-S&E occupations	3,135,800	1,726,200	1,409,600	2,590,300	213,900	136,700	181,900	13,000

See explanatory notes, if any, and SOURCE at end of table.

Appendix table 3-10.

Employed U.S. scientists and engineers, by highest degree attained, occupation, sex, and race or ethnicity: 1997

Highest degree and occupation	Employed S&Es, total	Sex		Race/ethnicity				
		Male	Female	White	Black	Hispanic	Asian	Other
Master's								
All occupations, total	2,819,800	1,800,500	1,019,300	2,330,500	151,300	88,100	242,000	7,900
S&E occupations, total	967,900	715,300	252,600	770,200	30,000	29,300	135,800	2,700
Scientists, total	592,000	374,400	217,600	475,100	21,900	16,000	77,400	1,700
Computer/math scientists, total	301,600	219,300	82,300	226,400	10,300	6,300	57,900	600
Life/related scientists, total	70,300	40,000	30,300	59,400	2,500	1,400	6,700	200
Physical/related scientists, total	69,100	52,600	16,500	57,700	1,500	1,600	7,900	500
Social/related scientists, total	151,100	62,500	88,600	131,600	7,500	6,600	4,800	400
Engineers, total	375,900	340,900	34,900	295,100	8,100	13,300	58,400	1,000
Non-S&E occupations, total	1,851,900	1,085,200	766,700	1,560,300	121,400	58,900	106,200	5,200
Managers/administrators	724,800	522,400	202,400	613,900	44,700	21,600	43,000	1,700
Other non-S&E occupations	1,127,100	562,800	564,300	946,400	76,600	37,300	63,200	3,500
Doctorate								
All occupations, total	696,000	528,000	168,000	562,200	21,300	19,100	91,100	2,200
S&E occupations, total	454,700	348,300	106,400	363,600	9,600	10,700	69,200	1,600
Scientists, total	375,300	274,200	101,000	309,100	8,600	9,300	46,900	1,400
Computer/math scientists, total	59,000	48,500	10,500	43,800	1,100	1,600	12,300	200
Life/related scientists, total	111,800	80,600	31,200	90,700	1,800	2,600	16,500	300
Physical/related scientists, total	83,700	73,000	10,700	68,200	1,400	1,700	12,100	200
Social/related scientists, total	120,800	72,200	48,600	106,400	4,400	3,300	5,900	700
Engineers, total	79,400	74,100	5,300	54,500	1,100	1,500	22,300	100
Non-S&E occupations, total	241,300	179,700	61,700	198,700	11,700	8,400	21,900	700
Managers/administrators	102,400	83,200	19,200	85,700	5,200	2,400	8,800	200
Other non-S&E occupations	138,900	96,500	42,400	112,900	6,500	6,000	13,100	400

^aIncludes professional degrees.

NOTES: The term "Scientists and Engineers" (S&Es) includes all people who have ever received a bachelor's degree or higher in an S&E field, plus people holding a non-S&E bachelor's or higher degree who were employed in an S&E occupation during the 1993, 1995, or 1997 SESTAT surveys. Figures are rounded to nearest hundred. Details may not add to total because of rounding.

SOURCE: National Science Foundation, Division of Science Resources Studies (NSF/SRS), Scientists and Engineers Statistical Data System (SESTAT), 1997.

See figure 3-9 in Volume 1.

Appendix table 3-11.

U.S. scientists and engineers, by highest degree attained, broad occupation, sex, and employment status: 1997

Occupation	S&Es, total	Employed			Unemployed/ seeking job	Not in labor force		
		Total	Full-time	Part-time		Total	Retired	Not seeking job
All degree levels^a								
All occupations, total^b	12,512,000	10,585,600	9,476,700	1,109,000	191,900	1,734,600	1,005,100	729,500
Male	8,097,900	7,037,600	6,589,100	448,600	112,800	947,500	754,400	193,100
Female	4,414,100	3,548,000	2,887,600	660,400	79,100	787,100	250,700	536,400
S&E occupations, total	3,899,000	3,369,400	3,105,000	264,400	52,900	476,600	334,300	142,300
Male	3,000,600	2,606,100	2,469,000	137,100	35,900	358,600	303,900	54,700
Female	898,400	763,300	636,000	127,300	17,000	118,100	30,400	87,600
Scientists, total	2,261,500	1,995,100	1,791,000	204,000	30,000	236,400	126,000	110,500
Male	1,506,700	1,355,400	1,266,700	88,700	16,100	135,100	98,200	37,000
Female	754,800	639,600	524,300	115,300	13,900	101,300	27,800	73,500
Computer/math scientists, total	1,129,700	1,039,500	974,400	65,100	14,600	75,700	40,000	35,700
Male	809,200	758,600	727,500	31,100	8,000	42,600	31,300	11,400
Female	320,500	280,900	246,900	34,000	6,600	33,000	8,700	24,300
Life/related scientists, total	387,300	321,800	292,700	29,000	7,400	58,100	26,700	31,400
Male	242,700	205,900	192,200	13,700	4,100	32,800	20,500	12,300
Female	144,500	115,900	100,600	15,300	3,300	25,300	6,200	19,100
Physical/related scientists, total	343,500	284,900	259,500	25,300	4,600	54,100	37,000	17,200
Male	264,400	223,100	206,500	16,500	3,000	38,400	31,400	7,000
Female	79,100	61,800	53,000	8,800	1,600	15,800	5,600	10,200
Social/related scientists, total	401,000	349,000	264,400	84,500	3,500	48,500	22,300	26,200
Male	190,300	167,900	140,500	27,400	1,100	21,300	15,100	6,300
Female	210,600	181,100	123,900	57,200	2,400	27,200	7,300	19,900
Engineers, total	1,637,500	1,374,400	1,314,000	60,400	22,900	240,200	208,400	31,800
Male	1,493,900	1,250,700	1,202,300	48,400	19,800	223,400	205,700	17,700
Female	143,600	123,700	111,700	12,000	3,100	16,800	2,600	14,100
Non-S&E occupations, total	8,613,100	7,216,200	6,371,600	844,600	138,900	1,257,900	670,700	587,200
Male	5,097,300	4,431,500	4,120,100	311,400	76,900	588,900	450,500	138,500
Female	3,515,700	2,784,700	2,251,600	533,100	62,100	669,000	220,200	448,700
Managers/administrators	2,321,300	2,019,900	1,941,100	78,800	29,100	272,300	212,000	60,300
Male	1,663,700	1,453,100	1,413,400	39,700	19,600	191,000	177,800	13,200
Female	657,600	566,800	527,700	39,100	9,500	81,300	34,100	47,100
Other non-S&E occupations	6,291,800	5,196,300	4,430,500	765,700	109,800	985,700	458,800	526,900
Male	3,433,700	2,978,400	2,706,700	271,700	57,300	398,000	272,700	125,300
Female	2,858,100	2,217,900	1,723,800	494,000	52,600	587,700	186,100	401,600

See explanatory notes, if any, and SOURCE at end of table.

Appendix table 3-11.

U.S. scientists and engineers, by highest degree attained, broad occupation, sex, and employment status: 1997

Occupation	S&Es, total	Employed			Unemployed/ seeking job	Not in labor force		
		Total	Full-time	Part-time		Total	Retired	Not seeking job
Bachelor's								
All occupations, total	7,456,800	6,193,700	5,545,400	648,300	123,600	1,139,500	604,800	534,700
Male	4,731,300	4,056,500	3,811,600	244,900	71,900	602,900	462,600	140,200
Female	2,725,500	2,137,200	1,733,700	403,500	51,700	536,600	142,200	394,500
S&E occupations, total	2,252,100	1,916,800	1,794,800	122,000	31,800	303,500	214,100	89,400
Male	1,776,100	1,521,800	1,452,000	69,800	20,800	233,500	199,000	34,400
Female	476,000	395,000	342,800	52,200	11,000	70,000	15,100	54,900
Scientists, total	1,135,500	1,000,200	915,400	84,800	16,700	118,600	52,300	66,300
Male	757,900	688,400	649,500	38,900	7,900	61,600	39,100	22,400
Female	377,700	311,800	265,900	45,900	8,800	57,000	13,100	43,900
Computer/math scientists,								
total	731,900	675,300	639,100	36,200	10,500	46,000	21,000	25,000
Male	516,300	487,900	472,900	15,000	5,400	22,900	16,200	6,800
Female	215,600	187,400	166,200	21,200	5,100	23,100	4,900	18,200
Life/related scientists, total	158,100	125,200	111,400	13,800	3,100	29,900	8,700	21,200
Male	90,400	74,300	67,500	6,700	900	15,200	6,000	9,200
Female	67,800	50,900	43,900	7,000	2,200	14,700	2,700	11,900
Physical/related scientists,								
total	163,300	131,700	118,200	13,500	2,400	29,200	18,800	10,400
Male	117,600	97,100	88,700	8,400	1,300	19,200	15,000	4,200
Female	45,600	34,600	29,500	5,000	1,100	10,000	3,800	6,200
Social/related scientists,								
total	82,200	68,000	46,700	21,300	800	13,500	3,700	9,700
Male	33,600	29,100	20,400	8,700	300	4,200	2,000	2,200
Female	48,600	38,900	26,300	12,600	500	9,200	1,700	7,500
Engineers, total	1,116,600	916,600	879,400	37,200	15,100	184,900	161,800	23,000
Male	1,018,200	833,400	802,600	30,900	12,900	171,900	159,900	12,000
Female	98,300	83,200	76,900	6,300	2,200	12,900	1,900	11,000
Non-S&E occupations,								
total	5,204,700	4,276,900	3,750,600	526,300	91,800	836,000	390,700	445,300
Male	2,955,200	2,534,700	2,359,600	175,100	51,100	369,400	263,600	105,800
Female	2,249,500	1,742,200	1,391,000	351,200	40,600	466,700	127,100	339,500
Managers/administrators	1,319,600	1,141,100	1,095,300	45,800	14,200	164,300	129,800	34,500
Male	931,300	808,500	787,100	21,300	8,600	114,300	108,500	5,800
Female	388,300	332,600	308,200	24,500	5,600	50,000	21,400	28,700
Other non-S&E occupations	3,885,100	3,135,800	2,655,300	480,600	77,600	671,700	260,900	410,800
Male	2,023,900	1,726,200	1,572,500	153,800	42,600	255,100	155,100	99,900
Female	1,861,300	1,409,600	1,082,800	326,800	35,000	416,600	105,800	310,900

See explanatory notes, if any, and SOURCE at end of table.

Appendix table 3-11.

U.S. scientists and engineers, by highest degree attained, broad occupation, sex, and employment status: 1997

Occupation	S&Es, total	Employed			Unemployed/ seeking job	Not in labor force		
		Total	Full-time	Part-time		Total	Retired	Not seeking job
Master's								
All occupations, total	3,311,300	2,819,800	2,503,300	316,500	52,200	439,300	289,600	149,700
Male	2,066,000	1,800,500	1,675,000	125,500	29,800	235,700	197,100	38,600
Female	1,245,300	1,019,300	828,300	191,000	22,400	203,600	92,500	111,200
S&E occupations, total	1,100,000	967,900	863,800	104,100	14,000	118,200	76,300	41,900
Male	806,700	715,300	668,400	46,900	9,700	81,700	66,600	15,100
Female	293,300	252,600	195,300	57,300	4,300	36,500	9,600	26,900
Scientists, total	671,100	592,000	507,400	84,600	7,200	71,900	37,700	34,200
Male	416,900	374,400	342,000	32,400	3,600	38,900	28,700	10,200
Female	254,200	217,600	165,400	52,200	3,500	33,000	9,000	24,000
Computer/math scientists, total	328,500	301,600	277,400	24,200	3,100	23,800	14,600	9,200
Male	236,500	219,300	206,200	13,100	2,000	15,200	11,800	3,400
Female	91,900	82,300	71,200	11,100	1,000	8,600	2,800	5,800
Life/related scientists, total	83,800	70,300	61,700	8,500	1,200	12,400	5,700	6,600
Male	46,500	40,000	36,800	3,200	700	5,800	4,000	1,800
Female	37,300	30,300	24,900	5,300	500	6,600	1,700	4,900
Physical/related scientists, total	83,300	69,100	61,800	7,300	1,000	13,100	8,200	4,900
Male	62,500	52,600	48,100	4,500	600	9,300	7,500	1,800
Female	20,800	16,500	13,700	2,800	400	3,800	700	3,100
Social/related scientists, total	175,600	151,100	106,500	44,600	2,000	22,600	9,200	13,400
Male	71,500	62,500	50,900	11,600	400	8,600	5,400	3,200
Female	104,100	88,600	55,600	33,000	1,600	14,000	3,800	10,200
Engineers, total	428,900	375,900	356,300	19,500	6,800	46,300	38,500	7,700
Male	389,800	340,900	326,400	14,500	6,100	42,800	37,900	4,800
Female	39,100	34,900	29,900	5,000	700	3,500	600	2,900
Non-S&E occupations, total	2,211,300	1,851,900	1,639,600	212,400	38,100	321,200	213,400	107,800
Male	1,259,300	1,085,200	1,006,600	78,700	20,100	154,000	130,500	23,500
Female	952,000	766,700	633,000	133,700	18,100	167,200	82,900	84,300
Managers/administrators	826,600	724,800	698,500	26,300	13,300	88,400	65,700	22,800
Male	591,900	522,400	509,300	13,100	9,700	59,700	54,200	5,500
Female	234,700	202,400	189,200	13,200	3,600	28,700	11,400	17,300
Other non-S&E occupations	1,384,700	1,127,100	941,000	186,100	24,800	232,700	147,700	85,000
Male	667,400	562,800	497,300	65,500	10,300	94,300	76,300	18,000
Female	717,200	564,300	443,800	120,500	14,500	138,400	71,400	67,000

See explanatory notes, if any, and SOURCE at end of table.

Appendix table 3-11.

U.S. scientists and engineers, by highest degree attained, broad occupation, sex, and employment status: 1997

Occupation	S&Es, total	Total	Full-time	Part-time	Unemployed/ seeking job	Total	Retired	Not seeking job
Doctorate								
All occupations, total	789,700	696,000	637,400	58,700	9,700	83,900	67,700	16,200
Male	599,400	528,000	494,900	33,100	7,000	64,400	58,400	6,000
Female	190,300	168,000	142,500	25,600	2,700	19,500	9,300	10,300
S&E occupations, total	511,900	454,700	418,900	35,800	6,300	50,900	41,300	9,600
Male	393,700	348,300	328,900	19,500	4,800	40,600	36,500	4,100
Female	118,100	106,400	90,000	16,300	1,600	10,200	4,800	5,400
Scientists, total	422,700	375,300	342,800	32,400	5,300	42,100	33,500	8,600
Male	310,400	274,200	257,500	16,800	3,900	32,200	28,800	3,500
Female	112,300	101,000	85,300	15,700	1,400	9,900	4,700	5,200
Computer/math scientists,								
total	64,800	59,000	54,500	4,500	1,000	4,900	3,900	1,000
Male	53,000	48,500	45,700	2,800	600	3,900	3,100	900
Female	11,900	10,500	8,800	1,700	400	1,000	800	200
Life/related scientists,								
total	128,400	111,800	105,500	6,300	2,400	14,200	10,900	3,200
Male	92,800	80,600	77,000	3,500	1,800	10,400	9,400	1,000
Female	35,600	31,200	28,500	2,700	600	3,800	1,500	2,300
Physical/related scientists,								
total	96,100	83,700	79,200	4,500	1,200	11,200	9,500	1,700
Male	83,900	73,000	69,400	3,600	1,100	9,800	8,900	900
Female	12,200	10,700	9,800	900	100	1,400	600	800
Social/related scientists,								
total	133,300	120,800	103,600	17,200	800	11,800	9,200	2,600
Male	80,800	72,200	65,400	6,800	500	8,200	7,400	700
Female	52,500	48,600	38,200	10,400	300	3,600	1,800	1,900
Engineers, total	89,200	79,400	76,100	3,300	1,000	8,800	7,800	900
Male	83,300	74,100	71,400	2,700	800	8,400	7,700	700
Female	5,900	5,300	4,700	700	200	400	100	300
Non-S&E occupations,								
total	277,800	241,300	218,400	22,900	3,400	33,100	26,400	6,700
Male	205,700	179,700	166,000	13,700	2,300	23,700	21,900	1,800
Female	72,100	61,700	52,400	9,200	1,100	9,300	4,500	4,800
Managers/administrators	115,300	102,400	98,300	4,100	1,200	11,700	10,600	1,100
Male	94,600	83,200	80,100	3,100	800	10,600	9,700	900
Female	20,700	19,200	18,200	1,000	300	1,100	900	200
Other non-S&E occupations	162,500	138,900	120,200	18,800	2,200	21,300	15,800	5,600
Male	111,100	96,500	85,900	10,600	1,400	13,100	12,200	1,000
Female	51,500	42,400	34,200	8,200	800	8,200	3,600	4,600

^aIncludes professional degrees.

^bTotal excludes 18,700 individuals who reported never having worked. For unemployed individuals, occupation is for their previous reported job.

NOTES: The term "Scientists and Engineers" (S&Es) includes all people who have ever received a bachelor's degree or higher in an S&E field, plus people holding a non-S&E bachelor's or higher degree who were employed in an S&E occupation during the 1993, 1995, or 1997 SESTAT surveys. Figures are rounded to nearest hundred. Details may not add to total because of rounding.

SOURCE: National Science Foundation, Division of Science Resources Studies (NSF/SRS), Scientists and Engineers Statistical Data System (SESTAT), 1997.

See p. 3-11 in Volume 1.

Appendix table 3-12.
Employed U.S. scientists and engineers, by highest degree attained, broad occupation, sex, and employment sector: 1997

Occupation and sex	Business/Industry				Educational institution				Government			
	Employed S&Es, total	Total	Profit	Self-employed	Non-profit	Total	4-yr. college/university	Other	Total	Federal	State/local	
All degree levels^a												
All occupations, total	10,585,600	7,264,900	5,910,800	728,100	625,900	1,953,500	940,600	1,012,900	1,367,300	575,100	792,100	
Male	7,037,600	5,148,100	4,363,500	501,900	282,800	959,400	551,600	407,800	930,200	437,400	492,800	
Female	3,548,000	2,116,800	1,547,300	226,200	343,200	994,100	389,000	605,100	437,100	137,800	299,300	
S&E occupations, total	3,369,400	2,343,600	2,126,400	110,100	107,000	586,700	383,000	475,700	439,100	250,600	188,600	
Male	2,606,100	1,883,400	1,750,300	73,200	59,800	383,000	325,400	57,600	339,800	200,100	139,600	
Female	763,300	460,200	376,100	36,900	47,200	203,700	150,300	53,400	99,400	50,400	48,900	
Scientists, total	1,995,100	1,236,900	1,066,000	81,000	89,800	512,700	409,100	103,600	245,500	139,600	105,900	
Male	1,355,400	869,100	779,800	45,900	43,400	316,300	265,500	50,800	170,000	102,400	67,600	
Female	639,600	367,700	286,300	35,100	46,400	196,400	143,600	52,800	75,500	37,200	38,300	
Computer/math scientists, total	1,039,500	828,900	771,800	25,100	32,000	121,200	88,200	33,000	89,400	53,300	36,100	
Male	758,600	616,600	578,300	19,700	18,600	78,900	59,100	19,800	63,100	39,800	23,200	
Female	280,900	212,300	193,500	5,400	13,400	42,200	29,100	13,100	26,300	13,400	12,900	
Life/related scientists, total	321,800	102,700	81,400	8,000	13,300	154,500	139,100	15,400	64,600	37,900	26,700	
Male	205,900	66,000	53,100	5,900	6,900	94,300	86,400	7,900	45,600	27,700	17,900	
Female	115,900	36,700	28,300	2,100	6,300	60,200	52,700	7,600	19,000	10,300	8,700	
Physical/related scientists, total	284,900	156,100	144,800	6,200	5,100	80,000	71,100	8,900	48,700	30,500	18,200	
Male	223,100	122,800	113,300	5,800	3,800	63,100	57,200	6,000	37,100	23,400	13,700	
Female	61,800	33,300	31,600	400	1,300	16,900	14,000	2,900	11,600	7,200	4,400	
Social/related scientists, total	349,000	149,200	68,000	41,700	39,400	157,000	110,600	46,400	42,800	17,900	24,900	
Male	167,900	63,700	35,100	14,500	14,100	79,900	62,800	17,100	24,200	11,500	12,700	
Female	181,100	85,400	32,900	27,200	25,300	77,100	47,800	29,300	18,600	6,300	12,300	
Engineers, total	1,374,400	1,106,700	1,060,400	29,100	17,200	74,000	66,700	7,400	193,600	110,900	82,700	
Male	1,250,700	1,014,200	970,500	27,300	16,400	66,700	59,900	6,800	169,800	97,700	72,100	
Female	123,700	92,500	89,900	1,800	800	7,300	6,800	600	23,900	13,200	10,600	
Non-S&E occupations, total	7,216,200	4,921,300	3,784,400	618,000	518,900	1,366,800	464,800	901,900	928,100	324,600	603,600	
Male	4,431,500	3,264,700	2,613,100	428,600	223,000	576,400	226,200	350,200	590,400	237,200	353,200	
Female	2,784,700	1,656,600	1,171,200	189,400	296,000	790,400	238,700	551,700	337,700	87,300	250,400	
Managers/administrators	2,019,900	1,527,000	1,318,800	70,000	138,300	190,000	90,300	99,700	303,000	122,700	180,200	
Male	1,453,100	1,136,900	1,015,000	48,100	73,800	101,400	46,100	55,300	214,700	93,900	120,800	
Female	566,800	390,100	303,700	21,900	64,400	88,500	44,200	44,300	88,200	28,800	59,400	
Other non-S&E occupations	5,196,300	3,394,300	2,465,600	548,000	380,700	1,176,800	374,500	802,300	625,200	201,800	423,400	
Male	2,978,400	2,127,800	1,598,100	380,500	149,100	474,900	180,100	294,900	375,700	143,300	232,400	
Female	2,217,900	1,266,500	867,500	167,500	231,500	701,900	194,500	507,400	249,500	58,500	191,000	

See explanatory notes, if any, and SOURCE at end of table.

Appendix table 3-12.
Employed U.S. scientists and engineers, by highest degree attained, broad occupation, sex, and employment sector: 1997

Occupation and sex	Business/industry				Educational institution				Government		
	Employed S&Es, total	Total	Profit	Self- employed	Non- profit	Total	4-yr. college/ university	Other	Total	Federal	State/ local
All occupations, total	6,193,700	4,582,200	3,903,100	360,500	318,600	780,800	317,600	463,200	830,700	337,900	492,900
Male	4,056,500	3,186,700	2,821,600	244,200	120,900	309,600	147,500	162,100	560,200	253,400	306,800
Female	2,137,200	1,395,500	1,081,500	116,200	197,700	471,200	170,000	301,100	270,500	84,400	186,100
S&E occupations, total	1,916,800	1,497,700	1,402,900	47,300	47,500	155,800	130,700	25,100	263,300	141,000	122,300
Male	1,521,800	1,224,200	1,157,200	39,600	27,400	92,000	77,800	14,300	205,500	111,900	93,600
Female	395,000	273,500	245,800	7,700	20,100	63,800	53,000	10,800	57,700	29,000	28,700
Scientists, total	1,000,200	740,100	672,100	29,500	38,500	131,200	110,200	21,100	128,900	69,200	59,700
Male	688,400	529,400	487,600	23,100	18,800	70,500	60,000	10,500	88,500	49,300	39,200
Female	311,800	210,600	184,600	6,400	19,700	60,800	50,100	10,600	40,400	19,900	20,500
Computer/math scientists,											
total	675,300	571,700	531,500	18,600	21,600	41,700	31,100	10,600	61,900	35,500	26,400
Male	487,900	420,400	394,500	14,000	11,900	25,600	19,400	6,200	41,900	25,000	16,900
Female	187,400	151,200	137,000	4,500	9,700	16,200	11,800	4,400	20,000	10,500	9,500
Life-related scientists,											
total	125,200	49,300	40,400	4,700	4,200	41,200	36,600	4,600	34,700	18,500	16,200
Male	74,300	29,400	24,300	4,100	1,000	20,700	18,000	2,800	24,200	14,300	9,900
Female	50,900	19,900	16,100	600	3,200	20,500	18,700	1,800	10,500	4,200	6,300
Physical/related scientists,											
total	131,700	87,300	81,800	3,600	1,900	21,900	20,600	1,300	22,400	11,100	11,300
Male	97,100	64,900	60,200	3,400	1,300	15,400	14,700	700	16,800	8,000	8,800
Female	34,600	22,400	21,600	200	600	6,500	5,900	600	5,600	3,200	2,500
Social/related scientists,											
total	68,000	31,800	18,400	2,700	10,700	26,400	21,700	4,600	9,900	4,100	5,800
Male	29,100	14,700	8,600	1,600	4,600	8,800	8,000	800	5,600	2,100	3,500
Female	38,900	17,100	9,900	1,100	6,100	17,600	13,800	3,800	4,200	2,000	2,300
Engineers, total	916,600	757,700	730,800	17,800	9,100	24,600	20,600	4,000	134,400	71,800	62,600
Male	833,400	694,800	669,600	16,500	8,700	21,600	17,800	3,800	117,100	62,600	54,400
Female	83,200	62,800	61,200	1,300	400	3,000	2,800	200	17,300	9,200	8,100
Non-S&E occupations,											
total	4,276,900	3,084,500	2,500,100	313,200	271,100	625,000	186,900	438,100	567,500	196,900	370,600
Male	2,534,700	1,962,500	1,664,400	204,600	93,500	217,600	69,800	147,800	354,600	141,500	213,200
Female	1,742,200	1,122,000	835,800	108,600	177,600	407,400	117,100	290,300	212,800	55,400	157,400
Managers/administrators	1,141,100	928,600	827,300	38,100	63,200	55,200	33,400	21,800	157,300	64,500	92,800
Male	808,500	679,900	626,100	25,000	28,800	22,200	12,200	10,000	106,400	46,400	60,000
Female	332,600	248,700	201,200	13,100	34,400	33,000	21,200	11,800	50,900	18,100	32,800
Other non-S&E occupations	3,135,800	2,155,800	1,672,900	275,100	207,900	569,800	153,500	416,300	410,200	132,400	277,800
Male	1,726,200	1,282,600	1,038,300	179,600	64,600	195,400	57,600	137,800	248,300	95,100	153,200
Female	1,409,600	873,200	634,500	95,500	143,200	374,400	95,900	278,500	162,000	37,300	124,600

See explanatory notes, if any, and SOURCE at end of table.

Appendix table 3-12.
Employed U.S. scientists and engineers, by highest degree attained, broad occupation, sex, and employment sector: 1997

Occupation and sex	Business/industry				Educational institution			Government			
	Employed S&Es, total	Total	Profit	Self- employed	Non- profit	Total	4-yr. college/ university	Other	Total	Federal	State/ local
All occupations, total	2,819,800	1,736,000	1,370,600	150,200	215,200	711,400	219,300	492,100	372,500	157,000	215,500
Male	1,800,500	1,220,700	1,034,800	85,700	100,200	327,400	115,900	211,500	252,400	122,700	129,700
Female	1,019,300	515,300	335,800	64,500	115,000	383,900	103,400	280,500	120,100	34,300	85,800
S&E occupations, total	967,900	657,200	580,800	39,100	37,300	182,500	113,300	69,200	128,200	74,600	53,600
Male	715,300	512,000	474,200	19,700	18,100	106,100	72,200	33,900	97,200	59,700	37,500
Female	252,600	145,200	106,700	19,300	19,200	76,400	41,100	35,300	31,000	14,900	16,100
Scientists, total	592,000	357,100	296,400	29,400	31,400	158,800	92,700	66,100	76,100	41,500	34,600
Male	374,400	238,400	215,400	10,500	12,500	84,900	53,700	31,100	51,100	30,200	20,900
Female	217,600	118,700	81,000	18,900	18,900	73,900	38,900	35,000	25,000	11,300	13,700
Computer/math scientists,											
total	301,600	228,400	214,300	5,600	8,500	49,500	29,500	20,000	23,700	15,200	8,500
Male	219,300	171,800	161,500	4,900	5,400	29,500	17,300	12,200	18,000	12,700	5,300
Female	82,300	56,500	52,800	600	3,100	20,000	12,100	7,800	5,700	2,500	3,200
Life/related scientists,											
total	70,300	22,500	18,000	1,500	3,000	31,100	23,500	7,600	16,600	8,400	8,200
Male	40,000	13,100	11,000	600	1,500	15,000	12,100	3,000	11,900	5,500	6,300
Female	30,300	9,400	7,000	900	1,500	16,100	11,400	4,600	4,800	2,900	1,900
Physical/related scientists,											
total	69,100	35,600	33,300	1,200	1,100	18,400	13,200	5,200	15,200	9,600	5,600
Male	52,600	28,800	27,200	1,000	600	13,500	10,100	3,400	10,300	6,500	3,800
Female	16,500	6,800	6,100	100	500	4,800	3,100	1,800	4,900	3,100	1,800
Social/related scientists,											
total	151,100	70,700	30,800	21,100	18,800	59,800	26,500	33,300	20,600	8,300	12,300
Male	62,500	24,700	15,800	3,900	5,000	26,800	14,200	12,600	11,000	5,500	5,500
Female	88,600	46,000	15,000	17,200	13,800	33,000	12,300	20,700	9,600	2,800	6,800
Engineers, total	375,900	300,100	284,400	9,700	5,900	23,700	20,600	3,100	52,100	33,000	19,000
Male	340,900	273,600	258,700	9,300	5,600	21,200	18,500	2,800	46,100	29,400	16,600
Female	34,900	26,500	25,700	400	300	2,500	2,200	300	6,000	3,600	2,400
Non-S&E occupations,											
total	1,851,900	1,078,700	789,700	111,100	177,900	528,900	106,000	422,900	244,300	82,400	161,900
Male	1,085,200	708,700	560,600	65,900	82,200	221,300	43,700	177,600	155,200	63,000	92,200
Female	766,700	370,100	229,100	45,200	95,800	307,600	62,300	245,300	89,100	19,300	69,700
Managers/administrators	724,800	506,500	420,900	24,900	60,700	93,700	30,100	63,600	124,600	48,600	76,000
Male	522,400	379,800	328,500	17,600	33,700	50,900	14,300	36,600	91,700	39,500	52,200
Female	202,400	126,700	92,400	7,300	27,000	42,800	15,800	27,000	32,900	9,100	23,800
Other non-S&E occupations	1,127,100	572,200	368,900	86,200	117,200	435,200	75,800	359,300	119,700	33,800	85,900
Male	562,800	328,800	232,100	48,300	48,400	170,400	29,400	141,000	63,500	23,500	40,000
Female	564,300	243,400	136,800	37,900	68,800	264,700	46,400	218,300	56,100	10,200	45,900

See explanatory notes, if any, and SOURCE at end of table.

Appendix table 3-12.
Employed U.S. scientists and engineers, by highest degree attained, broad occupation, sex, and employment sector: 1997

Occupation and sex	Business/Industry				Educational institution				Government		
	Employed S&Es, total	Total	Profit	Self-employed	Non-profit	Total	4-yr. college/university	Other	Total	Federal	State/local
Doctorate											
All occupations, total	696,000	289,100	212,500	38,300	38,300	341,800	302,000	39,800	65,100	42,500	22,600
Male	528,000	232,300	179,300	25,800	27,100	244,500	221,000	23,600	51,200	34,700	16,400
Female	168,000	56,800	33,200	12,400	11,200	97,300	81,000	16,200	13,900	7,800	6,200
S&E occupations, total	454,700	174,500	134,600	21,200	18,700	235,600	220,900	14,700	44,600	32,800	11,800
Male	348,300	137,900	113,200	12,400	12,400	175,200	166,800	8,400	35,200	26,900	8,300
Female	106,400	36,500	21,400	8,800	6,300	60,500	54,100	6,400	9,400	5,800	3,500
Scientists, total	375,300	127,200	91,200	19,600	16,400	209,900	195,400	14,500	38,100	27,300	10,800
Male	274,200	93,700	72,500	10,900	10,200	151,200	143,100	8,100	29,400	21,900	7,400
Female	101,000	33,600	18,600	8,700	6,200	58,700	52,300	6,300	8,800	5,400	3,400
Computer/math scientists, total	59,000	25,600	22,700	1,000	1,800	29,600	27,400	2,200	3,800	2,600	1,200
Male	48,500	21,700	19,700	700	1,300	23,500	22,200	1,300	3,200	2,200	1,100
Female	10,500	3,800	3,000	300	600	6,100	5,200	900	600	400	100
Life/related scientists, total	111,800	27,200	20,800	1,300	5,000	72,500	69,500	3,000	12,200	9,900	2,200
Male	80,600	20,800	16,300	1,000	3,500	50,700	48,800	1,900	9,100	7,400	1,700
Female	31,200	6,400	4,500	400	1,500	21,800	20,700	1,100	3,100	2,500	600
Physical/related scientists, total	83,700	33,100	29,700	1,300	2,100	39,700	37,300	2,400	10,800	9,500	1,300
Male	73,000	29,100	25,900	1,300	1,900	34,200	32,300	1,900	9,700	8,600	1,100
Female	10,700	4,100	3,800	100	200	5,500	5,000	500	1,100	900	200
Social/related scientists, total	120,800	41,400	18,000	16,000	7,400	68,000	61,200	6,800	11,400	5,300	6,100
Male	72,200	22,100	10,600	7,900	3,500	42,800	39,800	3,000	7,300	3,800	3,500
Female	48,600	19,300	7,300	8,000	3,900	25,300	21,400	3,800	4,100	1,600	2,500
Engineers, total	79,400	47,200	43,400	1,600	2,200	25,700	25,500	300	6,500	5,500	1,000
Male	74,100	44,300	40,700	1,500	2,100	23,900	23,700	300	5,900	5,000	900
Female	5,300	2,900	2,800	100	100	1,800	1,800	S	600	500	100
Non-S&E occupations, total	241,300	114,700	77,900	17,100	19,700	106,200	81,100	25,100	20,500	9,700	10,800
Male	179,700	94,400	66,100	13,500	14,800	69,400	54,200	15,200	15,900	7,800	8,100
Female	102,400	55,200	43,200	3,000	9,000	34,000	22,700	11,200	13,300	6,500	6,800
Managers/administrators	83,200	47,900	38,300	2,600	7,000	24,500	17,200	7,300	10,800	5,400	5,400
Male	19,200	7,300	4,900	400	2,000	9,500	5,600	3,900	2,500	1,100	1,400
Female	138,900	59,500	34,700	14,100	10,700	72,200	58,400	13,800	7,200	3,300	4,000
Other non-S&E occupations	96,500	46,500	27,800	10,900	7,800	44,900	37,000	7,900	5,100	2,400	2,700
Male	42,400	13,000	6,900	3,200	2,900	27,300	21,400	6,000	2,100	800	1,300
Female											

S = suppressed for reasons of confidentiality and/or data reliability

^aIncludes professional degrees.

NOTES: The term "Scientists and Engineers" (S&Es) includes all people who have ever received a bachelor's degree or higher in an S&E field, plus people holding a non-S&E bachelor's or higher degree who were employed in an S&E occupation during either the 1993, 1995, or 1997 SESTAT surveys. Figures are rounded to nearest hundred. Details may not add to total because of rounding.

SOURCE: National Science Foundation, Division of Science Resources Studies (NSF/SRS), Scientists and Engineers Statistical Data System (SESTAT), 1997.

See page 3-11 in Volume 1.

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Science and Engineering Indicators-2000

Appendix table 3-13.

U.S. scientists and engineers, by highest degree attained, broad occupation, race or ethnicity, and employment status: 1997

Occupation and race/ethnicity	S&Es, total	Employed			Unemploy- ed/seeking job	Not in labor force		
		Total	Full-time	Part-time		Total	Retired	Not seeking job
All degree levels^a								
All occupations, total^b	12,512,000	10,585,600	9,476,700	1,109,000	191,900	1,734,600	1,005,100	729,500
White	10,557,900	8,877,500	7,913,200	964,300	147,600	1,532,800	918,300	614,500
Black	640,200	555,600	509,300	46,300	14,300	70,300	40,700	29,500
Hispanic	422,200	371,500	333,600	37,900	9,700	41,000	13,500	27,500
Asian	849,400	745,600	688,500	57,100	19,000	84,800	30,000	54,800
Other	42,400	35,400	32,100	3,300	1,300	5,700	2,500	3,200
S&E occupations, total	3,899,000	3,369,400	3,105,000	264,400	52,900	476,600	334,300	142,300
White	3,260,200	2,791,900	2,561,500	230,400	40,500	427,800	312,400	115,400
Black	126,600	113,000	105,500	7,500	2,200	11,400	5,100	6,200
Hispanic	114,900	103,500	95,200	8,200	2,700	8,700	4,300	4,300
Asian	384,700	349,800	332,200	17,600	7,100	27,800	12,100	15,700
Other	12,600	11,300	10,600	700	400	900	300	600
Scientists, total	2,261,500	1,995,100	1,791,000	204,000	30,000	236,400	126,000	110,500
White	1,881,900	1,654,600	1,476,100	178,500	22,600	204,800	115,600	89,200
Black	88,300	77,500	71,400	6,200	1,300	9,500	3,900	5,500
Hispanic	62,800	55,800	48,900	6,800	1,900	5,100	1,800	3,200
Asian	220,400	200,100	188,200	11,900	3,900	16,400	4,500	11,900
Other	8,100	7,100	6,400	600	300	700	100	600
Computer/math scientists, total	1,129,700	1,039,500	974,400	65,100	14,600	75,700	40,000	35,700
White	917,100	839,400	782,500	56,900	11,100	66,600	36,800	29,800
Black	48,000	44,900	42,900	1,900	500	2,600	1,100	1,600
Hispanic	28,200	26,200	24,600	1,600	800	1,200	300	900
Asian	133,600	126,600	121,900	4,600	2,000	5,000	1,700	3,400
Other	2,800	2,500	2,400	100	200	100	100	100
Life/related scientists, total	387,300	321,800	292,700	29,000	7,400	58,100	26,700	31,400
White	324,000	272,400	246,900	25,400	5,200	46,400	22,900	23,500
Black	11,400	7,700	7,300	500	400	3,200	1,500	1,700
Hispanic	10,700	8,000	7,300	700	400	2,400	800	1,600
Asian	39,700	32,300	30,000	2,400	1,300	6,000	1,400	4,600
Other	1,500	1,400	1,300	100	S	100	S	100
Physical/related scientists, total	343,500	284,900	259,500	25,300	4,600	54,100	37,000	17,200
White	292,100	240,200	218,400	21,800	3,200	48,700	34,900	13,800
Black	10,000	8,400	7,900	400	100	1,500	800	800
Hispanic	8,800	7,200	6,600	700	700	900	400	500
Asian	31,400	27,900	25,700	2,200	500	3,000	900	2,200
Other	1,200	1,200	1,000	200	100	S	S	S
Social/related scientists, total	401,000	349,000	264,400	84,500	3,500	48,500	22,300	26,200
White	348,800	302,600	228,300	74,300	3,000	43,200	21,000	22,100
Black	18,900	16,500	13,200	3,300	300	2,100	600	1,500
Hispanic	15,100	14,400	10,500	3,900	100	600	200	400
Asian	15,700	13,300	10,600	2,700	S	2,300	500	1,800
Other	2,500	2,100	1,700	300	S	400	S	400
Engineers, total	1,637,500	1,374,400	1,314,000	60,400	22,900	240,200	208,400	31,800
White	1,378,300	1,137,300	1,085,400	51,900	17,900	223,000	196,800	26,200
Black	38,300	35,400	34,100	1,300	900	1,900	1,200	700
Hispanic	52,100	47,700	46,300	1,400	800	3,600	2,500	1,100
Asian	164,400	149,700	144,000	5,700	3,200	11,500	7,700	3,800
Other	4,500	4,200	4,100	100	100	200	200	S

See explanatory notes, if any, and SOURCE at end of table.

Appendix table 3-13.

U.S. scientists and engineers, by highest degree attained, broad occupation, race or ethnicity, and employment status: 1997

Occupation and race/ethnicity	S&Es, total	Employed				Unemploy- ed/seeking job	Not in labor force		
		Total	Full-time	Part-time	Total		Retired	Not seeking job	
Non-S&E occupations,									
total	8,613,100	7,216,200	6,371,600	844,600	138,900	1,257,900	670,700	587,200	
White	7,297,700	6,085,600	5,351,700	734,000	107,100	1,105,000	605,900	499,100	
Black	513,600	442,600	403,800	38,800	12,100	58,900	35,600	23,300	
Hispanic	307,300	268,000	238,300	29,700	6,900	32,400	9,200	23,200	
Asian	464,700	395,800	356,300	39,600	11,900	57,000	17,900	39,100	
Other	29,800	24,100	21,500	2,600	1,000	4,700	2,200	2,500	
Managers/administrators	2,321,300	2,019,900	1,941,100	78,800	29,100	272,300	212,000	60,300	
White	2,006,300	1,735,100	1,665,200	70,000	23,000	248,200	195,400	52,800	
Black	126,500	112,900	110,000	2,900	2,600	11,000	9,800	1,200	
Hispanic	68,800	64,000	62,200	1,800	600	4,200	2,000	2,200	
Asian	112,800	102,500	98,800	3,700	2,800	7,500	4,100	3,400	
Other	6,800	5,400	5,000	400	S	1,400	800	600	
Other non-S&E occupations	6,291,800	5,196,300	4,430,500	765,700	109,800	985,700	458,800	526,900	
White	5,291,300	4,350,500	3,686,500	664,000	84,100	856,800	410,500	446,300	
Black	387,100	329,700	293,800	35,900	9,400	47,900	25,800	22,100	
Hispanic	238,500	204,000	176,200	27,800	6,300	28,100	7,200	20,900	
Asian	351,900	293,400	257,500	35,900	9,100	49,500	13,800	35,700	
Other	23,000	18,700	16,500	2,200	900	3,300	1,400	1,900	
Bachelor's									
All occupations, total	7,456,800	6,193,700	5,545,400	648,300	123,600	1,139,500	604,800	534,700	
White	6,314,700	5,212,700	4,649,200	563,500	93,300	1,008,700	559,700	449,000	
Black	399,700	345,000	319,100	25,900	10,700	44,000	20,400	23,600	
Hispanic	272,600	237,700	213,300	24,500	6,500	28,400	6,300	22,100	
Asian	441,200	374,900	342,500	32,300	12,200	54,100	17,000	37,100	
Other	28,700	23,400	21,200	2,200	1,000	4,300	1,400	2,900	
S&E occupations, total	2,252,100	1,916,800	1,794,800	122,000	31,800	303,500	214,100	89,400	
White	1,932,200	1,631,800	1,523,600	108,300	24,300	276,100	202,500	73,700	
Black	82,100	72,600	69,300	3,300	1,700	7,800	3,300	4,400	
Hispanic	69,300	62,200	58,200	4,000	1,800	5,400	2,000	3,400	
Asian	160,400	143,200	137,100	6,100	3,800	13,500	6,100	7,300	
Other	8,100	7,000	6,700	400	300	800	200	600	
Scientists, total	1,135,500	1,000,200	915,400	84,800	16,700	118,600	52,300	66,300	
White	960,000	846,300	771,600	74,700	11,900	101,800	48,400	53,400	
Black	53,400	46,200	43,700	2,500	1,000	6,200	2,200	4,000	
Hispanic	33,600	29,400	25,900	3,500	1,300	2,900	400	2,400	
Asian	83,700	74,200	70,500	3,800	2,200	7,300	1,300	6,000	
Other	4,800	4,000	3,700	300	300	500	S	500	
Computer/math scientists,									
total	731,900	675,300	639,100	36,200	10,500	46,000	21,000	25,000	
White	615,700	566,600	533,500	33,000	8,000	41,100	19,200	22,000	
Black	35,400	33,100	32,300	800	300	1,900	900	1,100	
Hispanic	19,600	18,100	17,200	900	700	700	100	600	
Asian	59,200	55,800	54,500	1,400	1,200	2,200	900	1,300	
Other	2,000	1,700	1,700	100	200	100	S	100	
Life/related scientists,									
total	158,100	125,200	111,400	13,800	3,100	29,900	8,700	21,200	
White	134,300	110,000	97,700	12,300	1,500	22,800	7,600	15,200	
Black	5,700	3,000	2,800	200	400	2,300	700	1,600	
Hispanic	5,300	3,300	2,900	400	300	1,600	300	1,300	
Asian	11,800	8,000	7,000	900	800	3,000	100	2,900	
Other	1,000	900	900	S	S	100	S	100	

See explanatory notes, if any, and SOURCE at end of table.

Appendix table 3-13.

U.S. scientists and engineers, by highest degree attained, broad occupation, race or ethnicity, and employment status: 1997

Occupation and race/ethnicity	S&Es, total	Employed			Unemploy- ed/seeking job	Not in labor force		
		Total	Full-time	Part-time		Total	Retired	Not seeking job
Physical/related scientists,								
total	163,300	131,700	118,200	13,500	2,400	29,200	18,800	10,400
White	142,000	114,000	102,000	12,000	1,800	26,200	17,900	8,300
Black	6,700	5,500	5,200	300	S	1,100	600	500
Hispanic	4,500	3,900	3,400	500	200	400	S	400
Asian	9,600	7,900	7,200	700	200	1,500	300	1,200
Other	500	400	300	100	100	S	S	S
Social/related scientists,								
total	82,200	68,000	46,700	21,300	800	13,500	3,700	9,700
White	68,000	55,800	38,400	17,400	500	11,700	3,700	7,900
Black	5,600	4,600	3,400	1,300	200	800	S	800
Hispanic	4,300	4,200	2,400	1,800	S	100	S	100
Asian	3,100	2,500	1,700	800	S	600	S	600
Other	1,300	900	800	100	S	300	S	300
Engineers, total								
total	1,116,600	916,600	879,400	37,200	15,100	184,900	161,800	23,000
White	972,200	785,600	752,000	33,600	12,300	174,400	154,100	20,300
Black	28,700	26,300	25,600	700	700	1,600	1,100	400
Hispanic	35,700	32,800	32,300	500	500	2,500	1,600	900
Asian	76,700	68,900	66,600	2,300	1,500	6,200	4,900	1,400
Other	3,200	3,000	3,000	100	S	200	200	S
Non-S&E occupations,								
total	5,204,700	4,276,900	3,750,600	526,300	91,800	836,000	390,700	445,300
White	4,382,400	3,580,900	3,125,700	455,200	69,000	732,500	357,200	375,300
Black	317,600	272,400	249,800	22,600	8,900	36,300	17,100	19,200
Hispanic	203,300	175,500	155,100	20,500	4,700	23,000	4,300	18,700
Asian	280,800	231,700	205,500	26,200	8,400	40,600	10,900	29,700
Other	20,600	16,400	14,600	1,800	700	3,600	1,200	2,300
Managers/administrators								
total	1,319,600	1,141,100	1,095,300	45,800	14,200	164,300	129,800	34,500
White	1,152,100	990,500	949,700	40,800	10,200	151,400	121,500	29,900
Black	65,300	58,500	57,300	1,200	1,700	5,000	4,500	500
Hispanic	41,600	38,900	37,500	1,400	200	2,500	900	1,700
Asian	56,200	49,800	47,800	2,000	2,000	4,400	2,500	1,900
Other	4,400	3,400	3,100	300	S	1,000	400	600
Other non-S&E occupations								
total	3,885,100	3,135,800	2,655,300	480,600	77,600	671,700	260,900	410,800
White	3,230,400	2,590,300	2,176,000	414,400	58,900	581,200	235,700	345,500
Black	252,300	213,900	192,500	21,400	7,200	31,300	12,600	18,700
Hispanic	161,600	136,700	117,600	19,100	4,500	20,500	3,500	17,000
Asian	224,600	181,900	157,700	24,200	6,400	36,200	8,400	27,900
Other	16,200	13,000	11,400	1,600	700	2,500	800	1,700
Master's								
All occupations, total								
total	3,311,300	2,819,800	2,503,300	316,500	52,200	439,300	289,600	149,700
White	2,756,700	2,330,500	2,056,700	273,700	41,400	384,900	259,100	125,800
Black	176,100	151,300	136,600	14,700	2,900	21,900	16,900	5,000
Hispanic	99,600	88,100	79,000	9,100	2,700	8,800	4,800	3,900
Asian	270,000	242,000	223,900	18,100	4,800	23,200	8,400	14,800
Other	8,800	7,900	7,000	900	300	700	500	200
S&E occupations, total								
total	1,100,000	967,900	863,800	104,100	14,000	118,200	76,300	41,900
White	883,800	770,200	681,900	88,300	10,700	102,900	70,200	32,700
Black	33,400	30,000	26,500	3,500	400	3,100	1,400	1,700
Hispanic	31,900	29,300	26,200	3,100	700	1,900	1,200	800
Asian	148,100	135,800	126,700	9,100	2,100	10,200	3,500	6,800
Other	2,800	2,700	2,500	200	100	100	S	100

See explanatory notes, if any, and SOURCE at end of table.

Appendix table 3-13.

U.S. scientists and engineers, by highest degree attained, broad occupation, race or ethnicity, and employment status: 1997

Occupation and race/ethnicity	S&Es, total	Employed			Unemploy- ed/seeking job	Not in labor force		
		Total	Full-time	Part-time		Total	Retired	Not seeking job
Scientists, total	671,100	592,000	507,400	84,600	7,200	71,900	37,700	34,200
White	542,700	475,100	402,000	73,100	5,600	62,000	34,600	27,500
Black	24,900	21,900	19,100	2,900	300	2,700	1,300	1,400
Hispanic	17,500	16,000	13,700	2,300	400	1,100	500	600
Asian	84,300	77,400	71,200	6,100	900	6,000	1,300	4,700
Other	1,700	1,700	1,500	200	S	100	S	100
Computer/math scientists,								
total	328,500	301,600	277,400	24,200	3,100	23,800	14,600	9,200
White	249,000	226,400	206,300	20,000	2,200	20,400	13,800	6,600
Black	11,200	10,300	9,500	800	100	700	200	500
Hispanic	6,600	6,300	5,800	500	100	200	S	200
Asian	61,100	57,900	55,200	2,800	600	2,500	600	2,000
Other	600	600	600	S	S	S	S	S
Life/related scientists,								
total	83,800	70,300	61,700	8,500	1,200	12,400	5,700	6,600
White	69,900	59,400	52,100	7,400	1,000	9,500	4,300	5,100
Black	3,300	2,500	2,300	200	S	800	800	S
Hispanic	1,700	1,400	1,300	200	S	300	100	200
Asian	8,600	6,700	5,900	800	100	1,800	500	1,300
Other	200	200	100	100	S	S	S	S
Physical/related scientists,								
total	83,300	69,100	61,800	7,300	1,000	13,100	8,200	4,900
White	70,000	57,700	51,700	6,000	500	11,800	7,700	4,100
Black	1,900	1,500	1,400	100	S	400	100	200
Hispanic	2,200	1,600	1,500	200	300	300	200	S
Asian	8,700	7,900	6,800	1,100	200	600	100	500
Other	500	500	400	S	S	S	S	S
Social/related scientists,								
total	175,600	151,100	106,500	44,600	2,000	22,600	9,200	13,400
White	153,800	131,600	91,900	39,700	1,800	20,300	8,700	11,600
Black	8,500	7,500	5,800	1,800	100	800	200	600
Hispanic	7,000	6,600	5,100	1,500	S	300	200	200
Asian	5,900	4,800	3,300	1,500	S	1,100	100	900
Other	500	400	400	100	S	S	S	S
Engineers, total	428,900	375,900	356,300	19,500	6,800	46,300	38,500	7,700
White	341,100	295,100	279,900	15,200	5,100	40,800	35,700	5,200
Black	8,500	8,100	7,500	600	100	300	100	300
Hispanic	14,400	13,300	12,500	800	300	800	700	200
Asian	63,800	58,400	55,500	2,900	1,200	4,300	2,100	2,100
Other	1,100	1,000	1,000	S	100	S	S	S
Non-S&E occupations,								
total	2,211,300	1,851,900	1,639,600	212,400	38,100	321,200	213,400	107,800
White	1,872,900	1,560,300	1,374,900	185,400	30,600	282,000	188,900	93,200
Black	142,600	121,400	110,100	11,200	2,500	18,800	15,500	3,300
Hispanic	67,700	58,900	52,900	6,000	2,000	6,800	3,700	3,100
Asian	121,900	106,200	97,200	9,000	2,800	12,900	4,900	8,000
Other	6,000	5,200	4,500	700	300	600	500	100
Managers/administrators	826,600	724,800	698,500	26,300	13,300	88,400	65,700	22,800
White	705,400	613,900	590,900	23,000	12,000	79,500	59,100	20,300
Black	50,600	44,700	43,600	1,200	600	5,300	4,600	600
Hispanic	23,000	21,600	21,100	400	200	1,300	900	300
Asian	45,900	43,000	41,500	1,500	500	2,400	1,000	1,400
Other	1,800	1,700	1,500	200	S	100	S	100

See explanatory notes, if any, and SOURCE at end of table.

Appendix table 3-13.

U.S. scientists and engineers, by highest degree attained, broad occupation, race or ethnicity, and employment status: 1997

Occupation and race/ethnicity	S&Es, total	Employed				Unemploy- ed/seeking job	Not in labor force		
		Total	Full-time	Part-time	Total		Retired	Not seeking job	
Other non-S&E occupations	1,384,700	1,127,100	941,000	186,100	24,800	232,700	147,700	85,000	
White	1,167,600	946,400	784,000	162,400	18,600	202,600	129,700	72,800	
Black	92,000	76,600	66,600	10,100	1,800	13,500	10,800	2,700	
Hispanic	44,700	37,300	31,800	5,600	1,800	5,600	2,800	2,800	
Asian	76,100	63,200	55,700	7,500	2,300	10,500	3,900	6,600	
Other	4,300	3,500	2,900	500	200	500	500	100	
Doctorate									
All occupations, total	789,700	696,000	637,400	58,700	9,700	83,900	67,700	16,200	
White	642,800	562,200	511,000	51,200	7,400	73,200	59,800	13,400	
Black	24,500	21,300	20,100	1,300	600	2,600	2,200	400	
Hispanic	21,600	19,100	17,200	1,900	300	2,200	1,600	600	
Asian	98,100	91,100	87,000	4,100	1,500	5,400	3,700	1,700	
Other	2,700	2,200	2,100	200	S	500	400	S	
S&E occupations, total	511,900	454,700	418,900	35,800	6,300	50,900	41,300	9,600	
White	413,700	363,600	332,000	31,600	4,800	45,300	37,500	7,900	
Black	10,200	9,600	8,900	700	100	500	300	100	
Hispanic	12,100	10,700	9,900	900	300	1,100	900	200	
Asian	74,200	69,200	66,800	2,400	1,100	3,800	2,500	1,300	
Other	1,700	1,600	1,400	200	S	100	100	S	
Scientists, total	422,700	375,300	342,800	32,400	5,300	42,100	33,500	8,600	
White	351,300	309,100	280,400	28,700	4,400	37,800	30,500	7,300	
Black	9,100	8,600	7,800	700	100	500	300	100	
Hispanic	10,300	9,300	8,400	800	200	800	600	200	
Asian	50,400	46,900	44,900	2,000	600	2,800	1,900	1,000	
Other	1,600	1,400	1,300	200	S	100	100	S	
Computer/math scientists,									
total	64,800	59,000	54,500	4,500	1,000	4,900	3,900	1,000	
White	48,800	43,800	40,300	3,500	800	4,200	3,400	900	
Black	1,100	1,100	800	300	S	S	S	S	
Hispanic	1,900	1,600	1,400	100	S	300	200	S	
Asian	12,800	12,300	11,800	500	200	300	200	100	
Other	200	200	200	S	S	100	100	S	
Life/related scientists, total	128,400	111,800	105,500	6,300	2,400	14,200	10,900	3,200	
White	105,300	90,700	85,300	5,400	2,000	12,700	9,900	2,700	
Black	1,900	1,800	1,700	100	S	100	S	100	
Hispanic	2,800	2,600	2,400	200	S	200	100	100	
Asian	18,000	16,500	15,900	600	300	1,200	800	400	
Other	300	300	300	S	S	S	S	S	
Physical/related scientists,									
total	96,100	83,700	79,200	4,500	1,200	11,200	9,500	1,700	
White	79,300	68,200	64,300	3,900	900	10,200	8,800	1,400	
Black	1,400	1,400	1,300	100	S	S	S	S	
Hispanic	2,100	1,700	1,700	100	100	200	200	S	
Asian	13,100	12,100	11,600	500	100	800	500	300	
Other	300	200	200	S	S	S	S	S	
Social/related scientists,									
total	133,300	120,800	103,600	17,200	800	11,800	9,200	2,600	
White	117,800	106,400	90,500	15,900	700	10,800	8,400	2,300	
Black	4,700	4,400	4,100	300	S	300	300	100	
Hispanic	3,500	3,300	2,900	400	S	200	100	100	
Asian	6,500	5,900	5,500	400	S	500	400	100	
Other	800	700	600	200	S	S	S	S	

See explanatory notes, if any, and SOURCE at end of table.

Appendix table 3-13.

U.S. scientists and engineers, by highest degree attained, broad occupation, race or ethnicity, and employment status: 1997

Occupation and race/ethnicity	S&Es, total	Employed			Unemploy- ed/seeking job	Not in labor force		
		Total	Full-time	Part-time		Total	Retired	Not seeking job
Engineers, total	89,200	79,400	76,100	3,300	1,000	8,800	7,800	900
White	62,500	54,500	51,600	2,900	400	7,500	6,900	600
Black	1,100	1,100	1,100	S	S	S	S	S
Hispanic	1,800	1,500	1,400	100	S	300	200	S
Asian	23,800	22,300	21,900	400	500	1,000	700	300
Other	100	100	100	S	S	S	S	S
Non-S&E occupations, total	277,800	241,300	218,400	22,900	3,400	33,100	26,400	6,700
White	229,100	198,700	179,000	19,600	2,600	27,800	22,300	5,500
Black	14,300	11,700	11,200	500	500	2,200	1,900	300
Hispanic	9,500	8,400	7,400	1,000	S	1,100	700	400
Asian	23,900	21,900	20,200	1,700	300	1,600	1,200	400
Other	1,000	700	700	S	S	300	300	S
Managers/administrators	115,300	102,400	98,300	4,100	1,200	11,700	10,600	1,100
White	97,000	85,700	81,800	3,900	800	10,400	9,400	1,000
Black	5,900	5,200	5,100	100	300	500	500	S
Hispanic	2,500	2,400	2,400	S	S	100	100	S
Asian	9,300	8,800	8,700	100	S	400	400	S
Other	600	200	200	S	S	300	300	S
Other non-S&E occupations	162,500	138,900	120,200	18,800	2,200	21,300	15,800	5,600
White	132,100	112,900	97,200	15,700	1,700	17,500	13,000	4,500
Black	8,400	6,500	6,100	500	200	1,700	1,400	300
Hispanic	7,000	6,000	5,000	1,000	S	1,000	600	400
Asian	14,600	13,100	11,500	1,600	300	1,200	800	400
Other	400	400	400	S	S	S	S	S

S = suppressed for reasons of confidentiality and/or data reliability

^aIncludes professional degrees.^bTotal excludes 18,700 individuals who reported never having worked. For unemployed individuals, occupation is for their previous reported job.

NOTES: The term "Scientists and Engineers" (S&Es) includes all people who have ever received a bachelor's degree or higher in an S&E field, plus people holding a non-S&E bachelor's or higher degree who were employed in an S&E occupation during the 1993, 1995, or 1997 SESTAT surveys. Figures are rounded to nearest hundred. Details may not add to total because of rounding.

SOURCE: National Science Foundation, Division of Science Resources Studies (NSF/SRS), Scientists and Engineers Statistical Data System (SESTAT), 1997.

See page 3-12 in Volume 1.

Appendix table 3-14.

Employed U.S. scientists and engineers, by highest degree attained, broad occupation, race or ethnicity, and years since degree: 1997

Occupation and race/ethnicity	Employed S&Es, total	Years since degree							
		<5 years	5–9 years	10–14 years	15–19 years	20–24 years	25–29 years	30–34 years	35+ years
All degree levels^a									
All occupations, total	10,585,600	1,892,900	1,742,500	1,726,000	1,616,600	1,548,200	1,033,900	523,600	501,800
White	8,877,500	1,480,400	1,429,800	1,443,200	1,367,400	1,337,500	903,500	458,900	456,800
Black	555,600	113,700	98,100	95,500	86,400	86,100	45,200	15,500	15,000
Hispanic	371,500	105,200	69,400	64,800	55,400	40,900	17,800	10,000	8,000
Asian	745,600	182,900	139,700	116,700	103,200	79,000	64,800	38,400	20,900
Other	35,400	10,700	5,600	5,800	4,200	4,800	2,600	700	1,000
S&E occupations, total	3,369,400	679,300	624,800	610,300	499,400	391,500	275,600	152,300	136,200
White	2,791,900	512,100	496,100	511,000	432,600	341,900	241,200	132,600	124,400
Black	113,000	28,200	25,500	21,600	15,200	12,600	5,800	2,400	1,600
Hispanic	103,500	30,700	23,100	19,800	11,800	8,600	4,600	3,000	2,000
Asian	349,800	104,400	78,300	56,300	38,200	27,600	23,300	14,200	7,500
Other	11,300	3,900	1,800	1,600	1,600	800	700	200	700
Scientists, total	1,995,100	428,100	383,000	363,400	292,600	239,300	156,700	76,800	55,100
White	1,654,600	325,000	304,300	301,800	254,600	211,700	139,900	67,200	50,200
Black	77,500	18,500	17,300	16,100	9,400	9,100	4,200	2,200	800
Hispanic	55,800	17,700	13,300	10,100	6,000	4,700	2,300	900	800
Asian	200,100	64,200	47,100	34,200	21,600	13,500	10,000	6,400	3,100
Other	7,100	2,800	1,000	1,100	1,100	400	400	100	200
Computer/math scientists, total	1,039,500	190,400	211,700	220,000	156,800	125,100	81,700	35,300	18,600
White	839,400	134,100	164,200	177,600	133,900	109,900	72,200	30,900	16,600
Black	44,900	9,600	9,900	10,700	4,700	5,200	2,700	1,600	500
Hispanic	26,200	6,700	6,200	5,800	3,300	2,600	1,000	300	300
Asian	126,600	39,500	30,800	25,400	14,400	7,400	5,400	2,500	1,100
Other	2,500	500	500	500	600	S	300	S	100
Life/related scientists, total	321,800	73,100	62,900	45,300	46,600	40,100	25,900	15,700	12,200
White	272,400	57,000	52,100	38,100	40,900	36,000	23,200	13,800	11,200
Black	7,700	2,100	1,500	1,500	1,100	900	300	200	200
Hispanic	8,000	2,400	2,200	1,200	800	200	700	200	200
Asian	32,300	10,800	7,100	4,300	3,500	2,800	1,700	1,500	600
Other	1,400	900	100	200	100	100	S	S	S
Physical/related scientists, total	284,900	62,600	52,300	43,500	39,000	29,500	26,900	14,700	16,200
White	240,200	50,900	40,900	36,700	34,700	26,100	23,700	12,200	14,900
Black	8,400	1,600	2,800	1,500	1,100	500	600	200	100
Hispanic	7,200	2,000	2,200	1,400	300	700	200	200	200
Asian	27,900	7,700	6,200	3,600	2800	2100	2300	2200	1000
Other	1,200	400	200	300	100	S	100	S	S
Social/related scientists, total	349,000	101,900	56,100	54,600	50,300	44,600	22,200	11,100	8,000
White	302,600	83,000	47,000	49,400	45,100	39,600	20,800	10,300	7,400
Black	16,500	5,100	3,100	2,500	2,600	2,400	500	300	100
Hispanic	14,400	6,700	2,700	1,700	1,600	1,100	400	200	100
Asian	13,300	6,100	3,100	900	900	1,200	600	300	400
Other	2,100	1,100	200	200	200	300	S	100	S
Engineers, total	1,374,400	251,200	241,800	246,900	206,800	152,200	118,800	75,500	81,200
White	1,137,300	187,100	191,800	209,200	178,000	130,200	101,300	65,400	74,200
Black	35,400	9,800	8,200	5,500	5,800	3,600	1,600	200	700
Hispanic	47,700	13,000	9,800	9,600	5,800	3,900	2,300	2,000	1,300
Asian	149,700	40,200	31,200	22,100	16,600	14,100	13,300	7,900	4,400
Other	4,200	1,100	800	500	500	400	200	100	500

See explanatory notes, if any, and SOURCE at end of table.

Appendix table 3-14.

Employed U.S. scientists and engineers, by highest degree attained, broad occupation, race or ethnicity, and years since degree: 1997

Occupation and race/ethnicity	Employed S&Es, total	Years since degree							
		<5 years	5-9 years	10-14 years	15-19 years	20-24 years	25-29 years	30-34 years	35+ years
Non-S&E occupations,									
total	7,216,200	1,213,600	1,117,700	1,115,700	1,117,200	1,156,700	758,300	371,400	365,500
White	6,085,600	968,300	933,600	932,200	934,800	995,600	662,300	326,400	332,400
Black	442,600	85,500	72,700	73,800	71,200	73,400	39,400	13,100	13,400
Hispanic	268,000	74,500	46,300	45,000	43,600	32,300	13,200	7,100	6,000
Asian	395,800	78,500	61,400	60,400	65,000	51,400	41,500	24,200	13,400
Other	24,100	6,800	3,700	4,200	2,600	4,000	1,900	600	300
Managers/administrators	2,019,900	189,500	257,900	329,400	353,000	390,100	258,700	130,200	111,100
White	1,735,100	150,700	216,800	277,000	298,300	337,500	232,800	119,300	102,800
Black	112,900	12,500	16,300	19,500	22,400	25,200	10,400	3,100	3,400
Hispanic	64,000	11,100	10,000	13,900	12,300	9,900	4,200	1,700	1,100
Asian	102,500	14,400	14,100	17,800	19,400	16,200	10,800	5,900	3,900
Other	5,400	700	800	1,100	700	1,400	400	300	S
Other non-S&E occupations	5,196,300	1,024,100	859,800	786,300	764,200	766,600	499,700	241,200	254,400
White	4,350,500	817,600	716,800	655,200	636,500	658,100	429,500	207,100	229,600
Black	329,700	72,900	56,400	54,300	48,800	48,200	29,000	10,000	10,000
Hispanic	204,000	63,400	36,300	31,100	31,400	22,500	9,100	5,400	4,900
Asian	293,400	64,100	47,300	42,600	45,600	35,200	30,700	18,400	9,500
Other	18,700	6,100	3,000	3,100	1,900	2,600	1,500	300	300
Bachelor's									
All occupations, total	6,193,700	1,117,100	990,900	975,500	900,100	889,500	628,000	332,700	359,800
White	5,212,700	886,500	822,000	813,200	760,700	767,300	546,500	287,200	329,400
Black	345,000	70,300	60,600	60,900	51,000	51,900	28,800	11,000	10,500
Hispanic	237,700	70,000	43,900	38,500	35,700	25,200	11,400	7,200	5,700
Asian	374,900	82,500	61,300	59,000	50,400	41,700	39,600	26,800	13,600
Other	23,400	7,800	3,000	3,800	2,400	3,500	1,800	400	600
S&E occupations, total	1,916,800	344,100	347,800	376,200	295,300	215,000	152,500	89,700	96,200
White	1,631,800	273,100	288,400	320,800	258,600	190,500	133,500	77,600	89,300
Black	72,600	15,600	16,000	15,000	10,600	8,000	4,500	1,800	1,100
Hispanic	62,200	17,900	13,700	13,600	7,200	4,500	2,300	2,000	1,000
Asian	143,200	34,700	28,700	25,900	17,500	11,700	11,900	8,300	4,500
Other	7,000	2,800	1,000	800	1,400	400	300	100	300
Scientists, total	1,000,200	200,400	197,200	199,200	147,700	118,100	73,300	36,000	28,300
White	846,300	159,600	163,400	167,300	129,500	105,000	64,500	30,900	26,100
Black	46,200	9,700	10,300	10,100	5,500	5,400	3,100	1,600	500
Hispanic	29,400	9,300	7,600	6,200	2,700	2,000	1,000	300	200
Asian	74,200	19,800	15,600	15,100	9,100	5,600	4,500	3,200	1,400
Other	4,000	2,000	400	400	900	S	200	S	100
Computer/math scientists,									
total	675,300	102,700	132,100	159,300	104,400	86,100	53,400	24,200	13,200
White	566,600	79,100	107,900	132,600	90,200	76,700	46,800	21,100	12,100
Black	33,100	6,400	6,900	8,200	3,500	3,800	2,500	1,400	300
Hispanic	18,100	3,800	5,000	4,600	2,300	1,500	700	200	100
Asian	55,800	13,000	12,000	13,700	7,700	4,100	3,300	1,500	500
Other	1,700	400	300	200	600	S	100	S	100
Life/related scientists,									
total	125,200	32,700	26,300	14,900	17,800	14,200	8,100	6,600	4,700
White	110,000	27,200	23,500	12,600	16,500	12,500	7,500	6,000	4,300
Black	3,000	700	500	400	400	700	200	200	200
Hispanic	3,300	1,300	700	800	100	100	300	S	S
Asian	8,000	2,900	1,600	1,000	700	1,000	100	400	200
Other	900	600	100	100	100	S	S	S	S

See explanatory notes, if any, and SOURCE at end of table.

Appendix table 3-14.

Employed U.S. scientists and engineers, by highest degree attained, broad occupation, race or ethnicity, and years since degree: 1997

Occupation and race/ethnicity	Employed S&Es, total	Years since degree							
		<5 years	5–9 years	10–14 years	15–19 years	20–24 years	25–29 years	30–34 years	35+ years
Physical/related scientists,									
total	131,700	31,400	25,900	19,400	19,700	11,500	10,200	4,700	8,900
White	114,000	27,000	21,300	17,100	18,200	10,100	8,800	3,200	8,300
Black	5,500	800	1,800	1,100	800	400	500	100	S
Hispanic	3,900	1,100	1,400	600	100	400	S	100	100
Asian	7,900	2,100	1,400	500	600	600	800	1,200	600
Other	400	200	S	100	S	S	100	S	S
Social/related scientists,									
total	68,000	33,700	12,900	5,700	5,800	6,200	1,700	600	1,500
White	55,800	26,200	10,700	5,000	4,600	5,700	1,400	600	1,500
Black	4,600	1,700	1,100	400	900	500	S	S	S
Hispanic	4,200	3,200	600	300	200	S	S	S	S
Asian	2,500	1,700	500	S	S	S	300	S	S
Other	900	800	S	S	100	S	S	S	S
Engineers, total									
total	916,600	143,700	150,500	177,000	147,600	96,900	79,200	53,700	67,900
White	785,600	113,500	125,000	153,600	129,100	85,500	69,000	46,700	63,200
Black	26,300	5,900	5,800	4,900	5,100	2,600	1,400	100	600
Hispanic	32,800	8,500	6,000	7,400	4,500	2,400	1,300	1,700	900
Asian	68,900	14,900	13,100	10,800	8,400	6,100	7,400	5,100	3,100
Other	3,000	800	600	400	500	400	100	100	200
Non-S&E occupations,									
total	4,276,900	773,000	643,100	599,300	604,900	674,500	475,500	243,000	263,600
White	3,580,900	613,400	533,700	492,400	502,000	576,800	413,000	209,600	240,000
Black	272,400	54,600	44,500	45,900	40,400	43,900	24,300	9,300	9,400
Hispanic	175,500	52,200	30,300	24,900	28,500	20,700	9,100	5,200	4,700
Asian	231,700	47,800	32,600	33,100	32,900	30,000	27,600	18,500	9,200
Other	16,400	5,000	2,000	3,000	1,100	3,100	1,500	400	300
Managers/administrators									
total	1,141,100	88,700	125,700	178,900	187,700	225,200	158,700	88,600	87,700
White	990,500	70,200	105,800	151,700	160,000	195,800	143,700	81,900	81,400
Black	58,500	5,400	6,800	10,300	11,100	14,200	6,700	1,500	2,600
Hispanic	38,900	5,900	5,400	7,900	8,000	6,500	2,700	1,300	1,100
Asian	49,800	6,900	7,300	8,300	8,300	7,500	5,200	3,700	2,600
Other	3,400	300	300	800	300	1,200	400	100	S
Other non-S&E occupations									
total	3,135,800	684,300	517,400	420,400	417,200	449,400	316,900	154,400	175,900
White	2,590,300	543,200	427,900	340,700	342,000	381,000	269,300	127,700	158,600
Black	213,900	49,300	37,700	35,600	29,400	29,700	17,600	7,800	6,800
Hispanic	136,700	46,300	24,900	17,000	20,400	14,200	6,400	3,900	3,700
Asian	181,900	40,900	25,300	24,800	24,600	22,500	22,500	14,800	6,600
Other	13,000	4,700	1,700	2,300	800	1,900	1,100	300	300
Master's									
All occupations, total	2,819,800	543,700	501,400	474,400	450,600	413,000	260,300	110,800	65,600
White	2,330,500	415,900	406,600	394,900	376,600	352,000	226,800	99,800	58,000
Black	151,300	33,300	27,400	23,500	24,800	25,500	11,900	2,900	2,000
Hispanic	88,100	25,500	15,500	17,000	13,500	10,100	4,400	800	1,200
Asian	242,000	67,000	50,400	37,700	34,500	24,400	16,800	7,200	4,000
Other	7,900	2,000	1,500	1,300	1,200	900	400	100	300
S&E occupations, total									
total	967,900	238,900	194,000	157,900	135,600	115,100	70,200	35,600	20,700
White	770,200	171,500	146,500	128,100	116,000	98,800	61,300	30,800	17,200
Black	30,000	10,100	7,000	4,200	3,300	3,600	800	500	400
Hispanic	29,300	10,000	6,300	4,300	3,000	3,100	1,300	400	800
Asian	135,800	46,600	33,500	20,700	13,200	9,500	6,600	3,800	1,900
Other	2,700	700	600	700	100	100	200	S	300

See explanatory notes, if any, and SOURCE at end of table.

Appendix table 3-14.

Employed U.S. scientists and engineers, by highest degree attained, broad occupation, race or ethnicity, and years since degree: 1997

Occupation and race/ethnicity	Employed S&Es, total	Years since degree							
		<5 years	5–9 years	10–14 years	15–19 years	20–24 years	25–29 years	30–34 years	35+ years
Scientists, total	592,000	150,100	118,400	98,500	85,800	69,200	40,600	19,000	10,400
White	475,100	108,400	89,500	79,500	73,800	61,000	37,200	16,700	8,900
Black	21,900	6,500	4,900	3,700	2,700	2,800	600	400	300
Hispanic	16,000	5,900	2,900	2,400	2,000	1,900	500	100	300
Asian	77,400	28,800	20,600	12,400	7,300	3,400	2,300	1,700	800
Other	1,700	400	500	600	100	100	100	S	S
Computer/math scientists,									
total	301,600	73,600	68,700	51,800	43,600	31,400	20,500	8,300	3,800
White	226,400	46,300	49,400	38,700	36,300	27,000	18,300	7,200	3,100
Black	10,300	2,800	2,500	2,100	1,100	1,200	200	200	200
Hispanic	6,300	2,400	800	1,100	700	900	300	100	200
Asian	57,900	22,000	15,700	9,600	5,600	2,200	1,600	800	400
Other	600	S	200	300	S	S	100	S	S
Life/related scientists,									
total	70,300	17,100	14,500	10,400	10,700	9,300	4,700	2,500	1,000
White	59,400	13,200	11,900	8,600	9,000	9,200	4,400	2,100	1,000
Black	2,500	900	700	400	500	S	S	S	S
Hispanic	1,400	500	400	100	300	S	100	100	S
Asian	6,700	2,300	1,700	1,300	800	200	200	300	S
Other	200	200	S	S	S	S	S	S	S
Physical/related scientists,									
total	69,100	16,900	13,000	10,900	8,500	7,800	6,400	3,400	2,200
White	57,700	13,500	9,800	8,800	7,800	7,200	5,800	2,800	1,900
Black	1,500	500	600	100	200	S	100	100	S
Hispanic	1,600	500	300	500	100	100	S	S	100
Asian	7,900	2,300	2,100	1,300	500	400	500	500	200
Other	500	100	200	200	100	S	S	S	S
Social/related scientists,									
total	151,100	42,500	22,200	25,400	23,000	20,600	9,000	4,800	3,400
White	131,600	35,500	18,500	23,300	20,700	17,600	8,600	4,500	2,900
Black	7,500	2,300	1,100	1,000	900	1,600	300	200	100
Hispanic	6,600	2,500	1,400	700	1,000	900	100	S	100
Asian	4,800	2,100	1,200	200	400	500	100	100	300
Other	400	100	100	100	S	100	S	S	S
Engineers, total	375,900	88,800	75,600	59,400	49,700	45,900	29,600	16,600	10,300
White	295,100	63,000	57,000	48,600	42,200	37,800	24,100	14,100	8,300
Black	8,100	3,600	2,100	500	700	800	200	100	100
Hispanic	13,300	4,100	3,400	1,900	1,000	1,200	900	300	400
Asian	58,400	17,800	12,900	8,300	5,800	6,100	4,200	2,100	1,100
Other	1,000	300	100	100	100	S	100	S	300
Non-S&E occupations,									
total	1,851,900	304,900	307,400	316,400	315,000	298,000	190,100	75,200	44,900
White	1,560,300	244,400	260,000	266,800	260,600	253,300	165,500	68,900	40,700
Black	121,400	23,200	20,400	19,200	21,500	21,900	11,200	2,400	1,600
Hispanic	58,900	15,500	9,200	12,800	10,500	7,000	3,100	400	500
Asian	106,200	20,400	16,900	17,000	21,400	14,900	10,200	3,300	2,100
Other	5,200	1,400	900	700	1,100	800	200	100	S
Managers/administrators	724,800	84,900	116,200	125,400	134,200	136,600	77,200	33,600	16,800
White	613,900	67,600	97,800	104,600	112,200	117,600	68,200	30,100	15,800
Black	44,700	6,000	8,500	7,600	8,600	9,000	3,400	1,300	400
Hispanic	21,600	4,300	4,000	5,500	3,400	3,100	1,100	200	S
Asian	43,000	6,600	5,600	7,500	9,500	6,700	4,600	1,800	700
Other	1,700	400	300	200	400	200	S	100	S
Other non-S&E occupations	1,127,100	220,000	191,200	191,000	180,800	161,400	112,900	41,600	28,100
White	946,400	176,800	162,300	162,200	148,400	135,700	97,300	38,800	25,000
Black	76,600	17,200	11,900	11,600	12,800	12,900	7,800	1,100	1,200
Hispanic	37,300	11,200	5,300	7,300	7,100	3,900	2,000	200	500
Asian	63,200	13,800	11,300	9,500	11,900	8,200	5,700	1,600	1,400
Other	3,500	1,000	600	400	600	600	200	S	S

See explanatory notes, if any, and SOURCE at end of table.

Appendix table 3-14.

Employed U.S. scientists and engineers, by highest degree attained, broad occupation, race or ethnicity, and years since degree: 1997

Occupation and race/ethnicity	Employed S&Es, total	Years since degree							
		<5 years	5–9 years	10–14 years	15–19 years	20–24 years	25–29 years	30–34 years	35+ years
Doctorate									
All occupations, total	696,000	127,900	116,300	108,600	99,400	93,400	85,300	39,500	25,600
White	562,200	92,400	87,300	88,200	81,200	79,100	75,400	35,300	23,200
Black	21,300	4,100	4,700	4,500	4,800	2,200	900	200	100
Hispanic	19,100	4,000	4,300	2,700	2,600	2,700	1,600	900	300
Asian	91,100	27,000	19,800	13,000	10,500	9,000	7,100	3,000	1,900
Other	2,200	500	400	200	300	400	200	100	S
S&E occupations, total	454,700	92,500	80,900	70,100	61,800	56,000	51,600	25,400	16,400
White	363,600	64,000	59,700	57,100	52,100	47,700	45,200	22,800	15,200
Black	9,600	2,400	2,400	1,800	1,300	1,000	600	100	100
Hispanic	10,700	2,700	2,800	1,600	1,200	1,100	1,000	300	200
Asian	69,200	23,000	15,800	9,500	7,100	6,000	4,700	2,100	900
Other	1,600	400	200	100	200	300	200	100	S
Scientists, total	375,300	74,200	65,400	60,000	53,100	46,800	41,700	20,200	13,800
White	309,100	53,900	50,000	50,200	46,000	40,900	37,000	18,200	12,800
Black	8,600	2,100	2,000	1,700	1,200	900	500	100	100
Hispanic	9,300	2,400	2,500	1,300	1,000	800	800	300	200
Asian	46,900	15,500	10,700	6,600	4,700	4,100	3,100	1,500	700
Other	1,400	400	200	100	200	200	200	100	S
Computer/math scientists, total	59,000	12,400	10,700	8,200	8,000	7,400	7,800	2,800	1,600
White	43,800	7,200	6,800	5,700	6,900	6,200	7,000	2,600	1,400
Black	1,100	200	400	100	100	100	100	S	S
Hispanic	1,600	500	400	200	300	300	S	S	S
Asian	12,300	4,500	3,100	2,200	800	900	600	200	200
Other	200	100	S	S	S	S	100	S	S
Life/related scientists, total	111,800	22,900	21,400	17,400	15,500	12,900	11,900	5,700	4,100
White	90,700	16,100	16,600	14,900	13,300	11,000	10,100	4,900	3,700
Black	1,800	500	300	300	200	200	200	S	S
Hispanic	2,600	600	900	200	200	100	300	100	200
Asian	16,500	5,600	3,500	1,900	1,800	1,500	1,400	800	100
Other	300	100	S	S	S	100	S	S	S
Physical/related scientists, total	83,700	14,100	13,500	13,200	10,600	10,100	10,300	6,700	5,100
White	68,200	10,200	9,900	10,800	8,700	8,700	9,100	6,100	4,800
Black	1,400	300	400	300	200	100	S	S	100
Hispanic	1,700	300	500	300	100	200	200	100	S
Asian	12,100	3,200	2,700	1,800	1,600	1,100	1,000	400	200
Other	200	100	S	S	100	S	S	S	S
Social/related scientists, total	120,800	24,800	19,900	21,200	19,000	16,400	11,600	5,000	3,000
White	106,400	20,300	16,800	18,800	17,300	14,900	10,800	4,600	2,900
Black	4,400	1,000	900	1,000	800	400	200	100	S
Hispanic	3,300	1,000	700	600	400	200	300	100	S
Asian	5,900	2,200	1,400	700	500	700	200	200	100
Other	700	200	100	100	100	200	S	100	S
Engineers, total	79,400	18,300	15,500	10,100	8,700	9,200	9,900	5,100	2,600
White	54,500	10,100	9,700	6,800	6,100	6,800	8,100	4,600	2,400
Black	1,100	300	400	100	100	100	100	S	S
Hispanic	1,500	300	300	200	200	300	100	S	S
Asian	22,300	7,500	5,100	3,000	2,300	1,900	1,600	600	300
Other	100	S	S	S	S	100	S	S	S

See explanatory notes, if any, and SOURCE at end of table.

Appendix table 3-14.

Employed U.S. scientists and engineers, by highest degree attained, broad occupation, race or ethnicity, and years since degree: 1997

Occupation and race/ethnicity	Employed S&Es, total	Years since degree							
		<5 years	5–9 years	10–14 years	15–19 years	20–24 years	25–29 years	30–34 years	35+ years
Non-S&E occupations,									
total	241,300	35,500	35,400	38,500	37,600	37,400	33,700	14,100	9,100
White	198,700	28,500	27,600	31,100	29,100	31,500	30,200	12,600	8,100
Black	11,700	1,700	2,200	2,700	3,500	1,200	300	S	100
Hispanic	8,400	1,300	1,500	1,100	1,400	1,700	700	600	100
Asian	21,900	3,900	4,000	3,400	3,400	3,100	2,300	900	900
Other	700	100	200	100	200	S	100	S	S
Managers/administrators	102,400	9,800	12,300	14,500	18,600	21,000	16,800	6,200	3,100
White	85,700	7,700	9,900	11,200	14,700	18,400	15,300	5,700	2,700
Black	5,200	600	800	900	1,900	700	200	S	S
Hispanic	2,400	600	200	500	400	200	200	100	S
Asian	8,800	900	1,200	1,800	1,400	1,700	1,000	300	400
Other	200	S	S	100	S	S	100	S	S
Other non-S&E occupations	138,900	25,600	23,200	24,000	19,100	16,400	16,800	7,900	6,000
White	112,900	20,800	17,600	19,900	14,400	13,100	14,900	6,900	5,400
Black	6,500	1,100	1,400	1,800	1,600	500	200	S	S
Hispanic	6,000	700	1,200	600	1,000	1,400	500	500	100
Asian	13,100	3,000	2,800	1,700	1,900	1,400	1,300	500	500
Other	400	100	100	S	200	S	S	S	S

S = suppressed for reasons of confidentiality and/or data reliability

^aIncludes professional degrees.

NOTES: The term "Scientists and Engineers" (S&Es) includes all people who have ever received a bachelor's degree or higher in an S&E field, plus people holding a non-S&E bachelor's or higher degree who were employed in an S&E occupation during the 1993, 1995, or 1997 SESTAT surveys. Figures are rounded to nearest hundred. Details may not add to total because of rounding.

SOURCE: National Science Foundation, Division of Science Resources Studies (NSF/SRS), Scientists and Engineers Statistical Data System (SESTAT), 1997.

See page 3-12 in Volume 1.

Appendix table 3-15.

Employed U.S. scientists and engineers, by highest degree attained, occupation, race or ethnicity, and employment sector: 1997

Occupation and race/ethnicity	Employed S&Es, total	Sector of employment			
		Business/ industry	4-yr. college/ university	Other educational institution	Government
All degree levels^a					
All occupations, total	10,585,600	7,264,900	940,600	1,012,900	1,367,300
White	8,877,500	6,205,100	752,500	847,000	1,072,900
Black	555,600	279,600	49,700	90,000	136,300
Hispanic	371,500	227,700	38,400	44,000	61,400
Asian	745,600	532,900	95,700	27,900	89,100
Other	35,400	19,500	4,300	4,100	7,500
S&E occupations, total	3,369,400	2,343,600	475,700	111,000	439,100
White	2,791,900	1,955,600	386,200	96,700	353,300
Black	113,000	68,700	14,100	5,700	24,500
Hispanic	103,500	65,500	17,100	4,300	16,500
Asian	349,800	247,400	56,500	3,800	4,200
Other	11,300	6,300	1,900	400	2,800
Scientists, total	1,995,100	1,236,900	409,100	103,600	245,500
White	1,654,600	1,023,000	337,300	90,500	203,700
Black	77,500	44,200	12,000	5,300	16,100
Hispanic	55,800	29,400	14,800	4,100	7,500
Asian	200,100	137,200	43,200	3,300	16,300
Other	7,100	3,000	1,800	400	1,900
Computer/math scientists,					
total	1,039,500	828,900	88,200	33,000	89,400
White	839,400	669,300	71,400	28,000	70,700
Black	44,900	32,100	2,900	1,800	8,000
Hispanic	26,200	19,300	2,900	1,300	2,600
Asian	126,600	106,700	10,600	1,800	7,500
Other	2,500	1,500	400	S	600
Life/related scientists,					
total	321,800	102,700	139,100	15,400	64,600
White	272,400	88,200	114,100	13,800	56,300
Black	7,700	2,600	2,900	300	2,000
Hispanic	8,000	1,500	4,200	700	1,600
Asian	32,300	10,300	17,500	500	4,000
Other	1,400	100	400	100	700
Physical/related scientists,					
total	284,900	156,100	71,100	8,900	48,700
White	240,200	131,700	59,500	8,000	41,000
Black	8,400	4,200	1,300	200	2,600
Hispanic	7,200	3,700	2,300	100	1,200
Asian	27,900	16,100	7,700	500	3,600
Other	1,200	400	300	100	300
Social/related scientists,					
total	349,000	149,200	110,600	46,400	42,800
White	302,600	133,900	92,300	40,600	35,800
Black	16,500	5,200	4,800	3,100	3,500
Hispanic	14,400	4,900	5,500	2,000	2,000
Asian	13,300	4,100	7,400	500	1,300
Other	2,100	1,000	600	200	200
Engineers, total	1,374,400	1,106,700	66,700	7,400	193,600
White	1,137,300	932,600	48,900	6,200	149,600
Black	35,400	24,500	2,100	400	8,400
Hispanic	47,700	36,100	2,300	300	9,000
Asian	149,700	110,200	13,300	500	25,700
Other	4,200	3,200	100	S	900

See explanatory notes, if any, and SOURCE at end of table.

Appendix table 3-15.

Employed U.S. scientists and engineers, by highest degree attained, occupation, race or ethnicity, and employment sector: 1997

Occupation and race/ethnicity	Employed S&Es, total	Sector of employment			
		Business/ industry	4-yr. college/ university	Other educational institution	Government
Non-S&E occupations,					
total	7,216,200	4,921,300	464,800	901,900	928,100
White	6,085,600	4,249,500	366,300	750,200	719,600
Black	442,600	210,900	35,600	84,300	111,800
Hispanic	268,000	162,200	21,300	39,600	44,800
Asian	395,800	285,500	39,200	24,000	47,100
Other	24,100	13,200	2,400	3,700	4,800
Managers/administrators	2,019,900	1,527,000	90,300	99,700	303,000
White	1,735,100	1,341,000	73,800	78,900	241,500
Black	112,900	55,200	10,300	13,400	33,900
Hispanic	64,000	44,000	2,700	3,800	13,500
Asian	102,500	83,800	3,300	3,000	12,400
Other	5,400	3,100	200	600	1,600
Other non-S&E occupations	5,196,300	3,394,300	374,500	802,300	625,200
White	4,350,500	2,908,500	292,500	671,400	478,100
Black	329,700	155,700	25,300	70,900	77,800
Hispanic	204,000	118,200	18,600	35,800	31,300
Asian	293,400	201,700	35,900	21,100	34,800
Other	18,700	10,200	2,200	3,100	3,200
Bachelor's					
All occupations, total	6,193,700	4,582,200	317,600	463,200	830,700
White	5,212,700	3,938,600	251,300	382,700	640,100
Black	345,000	193,900	19,200	40,900	91,000
Hispanic	237,700	156,500	17,300	23,200	40,700
Asian	374,900	279,200	27,800	14,400	53,500
Other	23,400	13,900	2,000	2,100	5,500
S&E occupations, total	1,916,800	1,497,700	130,700	25,100	263,300
White	1,631,800	1,292,300	108,300	21,100	210,100
Black	72,600	51,700	3,300	1,700	15,900
Hispanic	62,200	43,300	6,600	1,000	11,200
Asian	143,200	106,000	11,800	1,200	24,000
Other	7,000	4,400	600	100	2,000
Scientists, total	1,000,200	740,100	110,200	21,100	128,900
White	846,300	629,700	92,500	17,800	106,300
Black	46,200	33,000	2,500	1,300	9,300
Hispanic	29,400	18,500	5,900	900	4,200
Asian	74,200	56,900	8,700	1,000	7,700
Other	4,000	2,000	600	100	1,300
Computer/math scientists,					
total	675,300	571,700	31,100	10,600	61,900
White	566,600	482,800	26,800	8,600	48,400
Black	33,100	25,400	900	1,000	5,800
Hispanic	18,100	14,500	1,200	300	2,000
Asian	55,800	47,900	2,200	700	5,100
Other	1,700	1,100	S	S	600
Life/related scientists,					
total	125,200	49,300	36,600	4,600	34,700
White	110,000	44,700	30,900	4,200	30,200
Black	3,000	1,300	400	S	1,300
Hispanic	3,300	600	1,400	300	1,000
Asian	8,000	2,600	3,700	100	1,600
Other	900	S	300	S	600

See explanatory notes, if any, and SOURCE at end of table.

Appendix table 3-15.

Employed U.S. scientists and engineers, by highest degree attained, occupation, race or ethnicity, and employment sector: 1997

Occupation and race/ethnicity	Employed S&Es, total	Sector of employment			
		Business/ industry	4-yr. college/ university	Other educational institution	Government
Physical/related scientists,					
total	131,700	87,300	20,600	1,300	22,400
White	114,000	76,000	17,800	1,200	19,000
Black	5,500	3,300	500	S	1,600
Hispanic	3,900	2,100	1,100	S	700
Asian	7,900	5,700	1,100	100	1,000
Other	400	200	100	S	100
Social/related scientists,					
total	68,000	31,800	21,700	4,600	9,900
White	55,800	26,200	17,000	3,900	8,700
Black	4,600	3,000	700	300	600
Hispanic	4,200	1,200	2,200	300	500
Asian	2,500	700	1,700	100	S
Other	900	700	200	100	S
Engineers, total	916,600	757,700	20,600	4,000	134,400
White	785,600	662,600	15,800	3,300	103,800
Black	26,300	18,600	800	400	6,600
Hispanic	32,800	24,800	800	100	7,100
Asian	68,900	49,200	3,200	300	16,300
Other	3,000	2,400	S	S	600
Non-S&E occupations,					
total	4,276,900	3,084,500	186,900	438,100	567,500
White	3,580,900	2,646,300	142,900	361,600	430,000
Black	272,400	142,300	15,900	39,200	75,100
Hispanic	175,500	113,300	10,600	22,200	29,500
Asian	231,700	173,200	15,900	13,200	29,400
Other	16,400	9,500	1,400	2,000	3,500
Managers/administrators	1,141,100	928,600	33,400	21,800	157,300
White	990,500	822,300	28,000	16,300	123,900
Black	58,500	33,000	3,100	3,400	19,200
Hispanic	38,900	28,800	1,300	700	8,000
Asian	49,800	42,500	900	1,300	5,000
Other	3,400	1,900	100	100	1,200
Other non-S&E occupations	3,135,800	2,155,800	153,500	416,300	410,200
White	2,590,300	1,824,000	115,000	345,400	306,100
Black	213,900	109,300	12,800	35,800	55,900
Hispanic	136,700	84,400	9,400	21,400	21,500
Asian	181,900	130,600	15,000	11,900	24,400
Other	13,000	7,500	1,300	1,900	2,300
Master's					
All occupations, total	2,819,800	1,736,000	219,300	492,100	372,500
White	2,330,500	1,444,400	172,400	416,000	297,700
Black	151,300	57,200	14,800	45,300	34,000
Hispanic	88,100	46,600	8,300	18,400	14,800
Asian	242,000	183,900	23,000	10,600	24,500
Other	7,900	3,800	700	1,900	1,500
S&E occupations, total	967,900	657,200	113,300	69,200	128,200
White	770,200	517,500	88,000	61,400	103,200
Black	30,000	14,100	5,000	3,300	7,500
Hispanic	29,300	18,600	3,600	2,800	4,200
Asian	135,800	105,500	16,300	1,300	12,700
Other	2,700	1,400	500	300	600

See explanatory notes, if any, and SOURCE at end of table.

Appendix table 3-15.

Employed U.S. scientists and engineers, by highest degree attained, occupation, race or ethnicity, and employment sector: 1997

Occupation and race/ethnicity	Employed S&Es, total	Sector of employment			
		Business/ industry	4-yr. college/ university	Other educational institution	Government
Scientists, total	592,000	357,100	92,700	66,100	76,100
White	475,100	279,600	73,800	58,700	63,000
Black	21,900	8,700	4,200	3,300	5,700
Hispanic	16,000	8,200	2,700	2,700	2,400
Asian	77,400	60,000	11,500	1,100	4,700
Other	1,700	600	500	300	300
Computer/math scientists,					
total	301,600	228,400	29,500	20,000	23,700
White	226,400	166,400	23,100	17,800	19,000
Black	10,300	6,100	1,300	700	2,200
Hispanic	6,300	4,100	900	800	600
Asian	57,900	51,500	3,900	700	1,800
Other	600	300	300	S	S
Life/related scientists,					
total	70,300	22,500	23,500	7,600	16,600
White	59,400	19,200	18,300	6,900	15,000
Black	2,500	700	1,200	200	400
Hispanic	1,400	200	500	300	400
Asian	6,700	2,500	3,400	100	800
Other	200	S	100	100	S
Physical/related scientists,					
total	69,100	35,600	13,200	5,200	15,200
White	57,700	30,000	10,400	4,800	12,400
Black	1,500	400	200	100	800
Hispanic	1,600	1,100	200	100	300
Asian	7,900	3,900	2,300	200	1,500
Other	500	200	S	S	200
Social/related scientists,					
total	151,100	70,700	26,500	33,300	20,600
White	131,600	64,100	22,000	29,100	16,500
Black	7,500	1,500	1,400	2,400	2,300
Hispanic	6,600	2,800	1,100	1,500	1,100
Asian	4,800	2,200	1,900	200	600
Other	400	100	100	100	100
Engineers, total	375,900	300,100	20,600	3,100	52,100
White	295,100	238,000	14,200	2,700	40,200
Black	8,100	5,400	800	S	1,800
Hispanic	13,300	10,400	900	100	1,900
Asian	58,400	45,500	4,800	200	7,900
Other	1,000	800	S	S	200
Non-S&E occupations,					
total	1,851,900	1,078,700	106,000	422,900	244,300
White	1,560,300	926,800	84,400	354,500	194,500
Black	121,400	43,100	9,800	42,000	26,500
Hispanic	58,900	28,000	4,800	15,600	10,600
Asian	106,200	78,400	6,800	9,200	11,800
Other	5,200	2,400	200	1,600	900
Managers/administrators	724,800	506,500	30,100	63,600	124,600
White	613,900	439,800	23,300	50,300	100,500
Black	44,700	18,600	4,500	8,900	12,700
Hispanic	21,600	13,100	1,000	2,700	4,800
Asian	43,000	34,000	1,400	1,300	6,300
Other	1,700	900	S	400	400

See explanatory notes, if any, and SOURCE at end of table.

Appendix table 3-15.

Employed U.S. scientists and engineers, by highest degree attained, occupation, race or ethnicity, and employment sector: 1997

Occupation and race/ethnicity	Employed S&Es, total	Sector of employment			
		Business/ industry	4-yr. college/ university	Other educational institution	Government
Other non-S&E occupations	1,127,100	572,200	75,800	359,300	119,700
White	946,400	487,000	61,100	304,300	94,100
Black	76,600	24,500	5,400	33,100	13,700
Hispanic	37,300	14,900	3,800	12,900	5,800
Asian	63,200	44,400	5,400	8,000	5,500
Other	3,500	1,500	200	1,200	600
Doctorate					
All occupations, total	696,000	289,100	302,000	39,800	65,100
White	562,200	228,600	246,500	32,200	54,800
Black	21,300	5,100	10,900	3,200	2,100
Hispanic	19,100	7,300	8,600	1,700	1,500
Asian	91,100	47,400	34,700	2,500	6,400
Other	2,200	600	1,200	200	300
S&E occupations, total	454,700	174,500	220,900	14,700	44,600
White	363,600	133,700	180,400	12,300	37,200
Black	9,600	2,300	5,600	600	1,100
Hispanic	10,700	3,000	6,400	500	900
Asian	69,200	35,000	27,700	1,300	5,200
Other	1,600	500	800	100	200
Scientists, total	375,300	127,200	195,400	14,500	38,100
White	309,100	103,200	161,500	12,100	32,300
Black	8,600	1,800	5,100	600	1,100
Hispanic	9,300	2,300	5,800	500	700
Asian	46,900	19,500	22,400	1,200	3,800
Other	1,400	400	700	100	200
Computer/math scientists,					
total	59,000	25,600	27,400	2,200	3,800
White	43,800	17,800	21,300	1,500	3,200
Black	1,100	300	700	100	S
Hispanic	1,600	500	800	200	S
Asian	12,300	6,900	4,500	400	500
Other	200	100	100	S	S
Life/related scientists,					
total	111,800	27,200	69,500	3,000	12,200
White	90,700	21,400	56,700	2,500	10,000
Black	1,800	300	1,100	100	300
Hispanic	2,600	500	1,800	100	200
Asian	16,500	4,900	9,700	400	1,600
Other	300	100	100	S	100
Physical/related scientists,					
total	83,700	33,100	37,300	2,400	10,800
White	68,200	25,600	31,300	2,000	9,300
Black	1,400	500	600	100	200
Hispanic	1,700	500	1,000	S	200
Asian	12,100	6,500	4,200	300	1,100
Other	200	100	200	S	S
Social/related scientists,					
total	120,800	41,400	61,200	6,800	11,400
White	106,400	38,500	52,100	6,000	9,700
Black	4,400	700	2,700	400	600
Hispanic	3,300	700	2,100	200	300
Asian	5,900	1,200	3,900	200	700
Other	700	200	400	100	100

See explanatory notes, if any, and SOURCE at end of table.

Appendix table 3-15.

Employed U.S. scientists and engineers, by highest degree attained, occupation, race or ethnicity, and employment sector: 1997

Occupation and race/ethnicity	Employed S&Es, total	Sector of employment			
		Business/ industry	4-yr. college/ university	Other educational institution	Government
Engineers, total	79,400	47,200	25,500	300	6,500
White	54,500	30,500	18,900	200	4,900
Black	1,100	400	600	S	100
Hispanic	1,500	700	600	S	100
Asian	22,300	15,500	5,300	100	1,400
Other	100	100	S	S	S
Non-S&E occupations,					
total	241,300	114,700	81,100	25,100	20,500
White	198,700	94,900	66,100	20,000	17,600
Black	11,700	2,900	5,300	2,600	1,000
Hispanic	8,400	4,300	2,200	1,200	700
Asian	21,900	12,400	7,100	1,300	1,200
Other	700	100	400	100	S
Managers/administrators	102,400	55,200	22,700	11,200	13,300
White	85,700	45,700	19,200	9,300	11,500
Black	5,200	1,300	2,100	1,200	600
Hispanic	2,400	1,400	400	300	400
Asian	8,800	6,700	1,000	400	800
Other	200	100	100	S	S
Other non-S&E occupations	138,900	59,500	58,400	13,800	7,200
White	112,900	49,200	46,900	10,600	6,100
Black	6,500	1,600	3,200	1,400	400
Hispanic	6,000	2,900	1,800	900	300
Asian	13,100	5,700	6,100	800	400
Other	400	S	300	100	S

S = suppressed for reasons of confidentiality and/or data reliability

^aIncludes professional degrees. .

NOTES: The term "Scientists and Engineers" (S&Es) includes all people who have ever received a bachelor's degree or higher in an S&E field, plus people holding a non-S&E bachelor's or higher degree who were employed in an S&E occupation during the 1993, 1995, or 1997 SESTAT surveys. Figures are rounded to nearest hundred. Details may not add to total because of rounding.

SOURCE: National Science Foundation, Division of Science Resources Studies (NSF/SRS), Scientists and Engineers Statistical Data System (SESTAT), 1997.

See page 3-13 in Volume 1.

Appendix table 3-16.

Median annual salaries of U.S. scientists and engineers, by highest degree attained, occupation, race or ethnicity, and employment sector: 1997
(Dollars)

Occupation and race/ethnicity	Employed S&Es, total	Sector of employment			
		Business/ industry	4-yr. college/ university	Other educational institution	Government
All degree levels^a					
All occupations, total	50,000	54,000	43,000	37,100	48,000
White	50,000	55,000	45,000	38,000	49,000
Black	40,000	42,000	37,500	36,400	41,000
Hispanic	44,000	48,000	37,600	36,000	44,000
Asian	50,000	52,000	38,000	35,000	48,000
Other	40,000	40,000	30,000	35,000	45,000
S&E occupations, total	55,000	58,000	44,500	43,000	52,000
White	55,000	59,000	45,000	43,000	53,000
Black	48,000	50,000	40,000	40,000	48,000
Hispanic	50,000	53,000	39,100	49,000	49,000
Asian	55,000	60,000	40,000	43,300	52,000
Other	49,000	50,000	25,000	S	50,000
Scientists, total	52,000	55,700	43,000	43,000	50,000
White	52,300	56,000	44,000	43,000	50,000
Black	46,000	48,000	40,000	39,000	45,000
Hispanic	48,000	51,000	39,000	49,000	45,000
Asian	53,000	58,000	38,000	39,000	46,400
Other	40,000	50,000	25,000	S	40,000
Computer/math scientists,					
total	56,000	58,000	45,000	43,000	52,000
White	56,800	59,100	45,000	42,000	53,000
Black	48,000	50,000	40,000	S	46,000
Hispanic	53,000	55,000	42,600	S	50,000
Asian	56,000	60,000	44,000	47,000	46,400
Other	54,000	66,000	S	S	S
Life/related scientists,					
total	44,000	48,000	40,000	42,000	44,000
White	45,000	46,000	42,000	42,000	45,000
Black	45,900	52,000	31,500	S	46,000
Hispanic	40,000	50,000	35,700	S	40,000
Asian	40,000	55,000	32,000	34,000	42,000
Other	27,900	S	25,000	S	38,000
Physical/related scientists,					
total	50,000	52,500	42,000	40,000	50,100
White	50,000	53,200	44,000	40,000	51,000
Black	42,000	42,000	37,000	S	45,000
Hispanic	41,300	42,000	35,800	S	43,800
Asian	50,000	55,000	36,000	S	49,200
Other					
Social/related scientists, total	45,000	40,000	45,000	45,000	50,000
White	45,000	42,000	45,000	45,000	50,000
Black	36,900	33,000	43,000	38,500	36,000
Hispanic	40,000	40,000	42,000	45,000	42,000
Asian	44,000	46,700	42,000	36,000	55,000
Other	30,000	25,000	40,000	S	S
Engineers, total	60,000	60,000	52,600	48,000	56,000
White	60,000	60,000	55,000	47,000	57,000
Black	52,000	52,000	44,000	S	52,000
Hispanic	54,000	55,000	41,000	S	54,000
Asian	58,000	60,000	47,000	S	55,000
Other	53,000	53,000	S	S	55,000

See explanatory notes, if any, and SOURCE at end of table.

Appendix table 3-16.

Median annual salaries of U.S. scientists and engineers, by highest degree attained, occupation, race or ethnicity, and employment sector: 1997
(Dollars)

Occupation and race/ethnicity	Employed S&Es, total	Sector of employment			
		Business/ industry	4-yr. college/ university	Other educational institution	Government
Non-S&E occupations,					
total	46,000	50,000	42,000	36,000	44,400
White	48,000	51,000	43,500	36,000	45,000
Black	38,000	38,500	37,000	36,000	39,000
Hispanic	40,000	42,000	37,300	35,000	42,000
Asian	42,000	45,000	36,000	33,000	40,000
Other	36,000	35,000	30,000	35,000	45,000
Managers/administrators	62,000	66,000	55,000	53,200	54,500
White	64,000	68,000	55,000	54,000	55,000
Black	50,000	50,000	50,000	48,000	50,000
Hispanic	55,000	59,000	42,000	53,100	48,000
Asian	60,000	60,000	60,000	50,000	52,100
Other	50,900	59,000	S	S	46,000
Other non-S&E occupations	40,000	42,000	38,000	35,000	40,000
White	40,000	44,000	40,000	35,000	40,000
Black	35,000	35,000	35,000	33,500	35,700
Hispanic	36,000	35,000	35,000	33,000	38,000
Asian	38,700	40,000	35,000	32,000	37,000
Other	32,000	30,000	30,000	34,000	37,000
Bachelor's					
All occupations, total	45,000	48,000	30,000	29,000	42,500
White	45,500	50,000	30,000	29,000	43,500
Black	36,000	39,000	30,000	28,000	37,000
Hispanic	40,000	42,000	29,000	30,000	40,000
Asian	42,300	45,000	30,000	29,000	44,000
Other	35,000	35,000	S	26,200	40,000
S&E occupations, total	52,000	55,000	24,000	36,000	50,000
White	53,000	55,000	24,000	36,000	50,100
Black	47,500	48,000	25,000	S	48,000
Hispanic	49,500	50,000	22,000	S	48,000
Asian	50,000	50,000	26,000	S	50,400
Other	45,000	50,000	S	S	40,000
Scientists, total	50,000	52,000	23,000	36,000	45,000
White	50,000	53,000	22,000	36,000	46,000
Black	45,000	45,000	S	S	46,000
Hispanic	46,000	49,000	22,000	S	40,000
Asian	48,000	50,000	25,000	S	45,000
Other	31,600	40,000	S	S	S
Computer/math scientists,					
total	54,000	55,000	39,200	39,200	50,000
White	55,000	55,000	40,000	39,200	50,000
Black	47,000	48,000	S	S	46,000
Hispanic	50,000	52,400	S	S	48,000
Asian	50,000	52,000	S	S	46,000
Other	S	S	S	S	S
Life/related scientists,					
total	36,000	40,000	20,000	S	40,000
White	36,000	40,000	19,000	S	40,000
Black	46,000	S	S	S	S
Hispanic	33,000	S	S	S	S
Asian	35,000	S	24,000	S	S
Other	S	S	S	S	S

See explanatory notes, if any, and SOURCE at end of table.

Appendix table 3-16.

Median annual salaries of U.S. scientists and engineers, by highest degree attained, occupation, race or ethnicity, and employment sector: 1997
(Dollars)

Occupation and race/ethnicity	Employed S&Es, total	Sector of employment			
		Business/industry	4-yr. college/university	Other educational institution	Government
Physical/related scientists,					
total	42,000	45,000	15,000	S	45,000
White	42,800	45,000	15,000	S	45,000
Black	41,000	41,000	S	S	S
Hispanic	34,000	34,000	S	S	S
Asian	40,000	41,000	S	S	S
Other	S	S	S	S	S
Social/related scientists,					
total	25,000	25,200	16,000	S	40,000
White	25,000	25,200	16,000	S	40,000
Black	27,500	S	S	S	S
Hispanic	22,500	S	S	S	S
Asian	S	S	S	S	S
Other	S	S	S	S	S
Engineers, total					
total	55,000	56,000	38,000	42,000	55,000
White	56,700	58,000	43,000	S	55,000
Black	50,000	50,000	S	S	50,000
Hispanic	52,000	52,000	S	S	54,000
Asian	51,000	52,000	35,000	S	53,500
Other	53,000	52,700	S	S	S
Non-S&E occupations,					
total	40,000	42,000	33,000	29,000	39,000
White	40,000	45,000	34,000	29,000	40,000
Black	33,000	35,000	31,000	28,000	35,000
Hispanic	35,000	35,000	30,000	30,000	39,000
Asian	36,500	39,000	32,000	29,000	37,000
Other	31,000	30,000	S	26,500	40,000
Managers/administrators					
total	56,000	60,000	47,000	38,000	50,000
White	60,000	60,000	48,400	36,000	50,000
Black	45,000	47,000	S	S	45,000
Hispanic	49,500	53,800	S	S	46,000
Asian	50,000	50,000	S	S	50,000
Other	46,000	55,000	S	S	S
Other non-S&E occupations					
total	35,000	36,000	30,000	28,000	35,000
White	35,000	37,000	30,000	28,400	36,000
Black	30,000	30,000	28,000	27,100	33,000
Hispanic	30,200	30,000	29,000	29,500	36,000
Asian	35,000	36,000	32,000	28,000	36,000
Other	29,000	25,500	S	25,000	33,000
Master's					
All occupations, total					
total	53,000	61,000	37,200	43,500	50,000
White	54,000	63,000	38,000	44,000	51,600
Black	45,000	50,000	36,000	43,000	45,000
Hispanic	50,000	55,000	34,300	43,000	48,000
Asian	55,000	60,000	34,000	40,000	51,000
Other	45,000	50,000	S	41,500	50,900
S&E occupations, total					
total	59,000	63,000	33,000	45,000	54,000
White	60,000	64,000	34,800	45,000	54,000
Black	48,000	57,000	27,000	38,500	45,000
Hispanic	55,000	58,500	33,000	48,000	50,000
Asian	59,000	60,000	31,000	S	53,000
Other	50,000	55,000	S	S	S

See explanatory notes, if any, and SOURCE at end of table.

Appendix table 3-16.

Median annual salaries of U.S. scientists and engineers, by highest degree attained, occupation, race or ethnicity, and employment sector: 1997
(Dollars)

Occupation and race/ethnicity	Employed S&Es, total	Sector of employment			
		Business/ industry	4-yr. college/ university	Other educational institution	Government
Scientists, total	54,000	60,000	33,000	45,000	50,000
White	54,000	61,000	34,000	45,000	51,000
Black	43,000	55,000	28,000	38,500	42,000
Hispanic	50,000	55,000	33,000	48,000	46,500
Asian	57,000	60,000	32,000	S	45,000
Other	42,000	S	S	S	S
Computer/math scientists,					
total	60,000	65,000	38,000	45,000	55,000
White	61,000	65,000	39,600	45,000	56,500
Black	52,000	59,500	S	S	50,000
Hispanic	59,500	63,200	S	S	S
Asian	60,000	61,000	39,000	S	S
Other	S	S	S	S	S
Life/related scientists,					
total	42,000	49,000	31,000	42,000	44,000
White	42,000	50,000	32,000	42,000	44,900
Black	39,000	S	S	S	S
Hispanic	33,000	S	S	S	S
Asian	39,000	45,000	28,000	S	S
Other	S	S	S	S	S
Physical/related scientists,					
total	51,000	58,000	30,000	41,000	51,000
White	52,000	60,000	32,600	41,000	52,000
Black	41,000	S	S	S	S
Hispanic	47,500	S	S	S	S
Asian	44,000	51,000	30,000	S	S
Other	S	S	S	S	S
Social/related scientists,					
total	41,100	40,000	30,000	45,000	46,000
White	42,000	40,000	29,300	46,000	48,000
Black	35,000	S	S	38,500	35,000
Hispanic	45,000	40,000	S	S	S
Asian	38,000	48,000	S	S	S
Other	S	S	S	S	S
Engineers, total	63,600	65,000	39,000	48,000	60,000
White	65,000	66,000	45,000	S	60,000
Black	58,000	60,000	S	S	56,000
Hispanic	58,500	60,000	S	S	53,000
Asian	60,000	61,000	30,000	S	56,600
Other	55,000	S	S	S	S
Non-S&E occupations,					
total	50,000	60,000	40,000	43,000	50,000
White	50,500	60,000	42,000	44,000	50,000
Black	44,000	45,000	39,000	43,000	45,700
Hispanic	46,000	54,000	36,000	42,000	46,300
Asian	50,000	52,000	41,000	38,000	48,000
Other	42,000	42,600	S	40,000	S
Managers/administrators	68,000	75,000	55,000	54,000	59,800
White	70,000	75,000	56,000	54,000	60,000
Black	54,700	55,000	46,000	50,000	55,800
Hispanic	60,000	66,000	S	53,100	54,500
Asian	65,000	70,000	S	S	56,000
Other	53,500	S	S	S	S

See explanatory notes, if any, and SOURCE at end of table.

Appendix table 3-16.

Median annual salaries of U.S. scientists and engineers, by highest degree attained, occupation, race or ethnicity, and employment sector: 1997
(Dollars)

Occupation and race/ethnicity	Employed S&Es, total	Sector of employment			
		Business/ industry	4-yr. college/ university	Other educational institution	Government
Other non-S&E occupations	42,000	43,200	36,000	41,000	42,000
White	42,000	45,000	36,000	41,600	42,700
Black	40,000	35,000	35,000	40,000	40,000
Hispanic	39,000	39,000	32,000	39,000	45,000
Asian	42,000	45,000	39,000	37,500	42,900
Other	37,000	S	S	S	S
Doctorate					
All occupations, total	63,000	74,700	55,000	52,000	65,000
White	63,400	75,000	56,000	52,000	65,600
Black	54,000	65,000	50,000	58,700	58,000
Hispanic	55,000	67,800	51,000	51,000	53,000
Asian	65,000	72,000	50,000	50,000	60,000
Other	52,000	70,000	49,000	S	48,000
S&E occupations, total	62,000	72,700	54,000	49,200	63,400
White	62,000	75,000	55,000	49,000	65,000
Black	55,000	69,000	50,000	45,000	58,000
Hispanic	55,900	69,000	50,000	50,000	60,500
Asian	62,000	70,000	48,000	48,000	60,000
Other	50,000	70,000	48,500	S	48,000
Scientists, total	60,000	71,000	52,000	49,200	62,000
White	60,000	72,100	54,000	49,000	62,000
Black	53,000	65,000	49,000	45,000	58,000
Hispanic	52,000	65,000	48,000	50,000	60,000
Asian	56,000	69,000	45,000	48,000	60,100
Other	49,000	70,000	48,500	S	48,000
Computer/math scientists,					
total	65,000	76,000	56,000	50,000	65,000
White	65,000	79,000	57,000	54,000	65,000
Black	63,000	80,000	57,700	S	S
Hispanic	55,000	72,000	55,000	S	S
Asian	65,000	71,000	52,000	S	72,000
Other	S	S	S	S	S
Life/related scientists,					
total	57,500	70,000	52,000	46,000	61,000
White	59,000	70,000	55,000	48,000	62,000
Black	54,000	69,000	45,000	S	61,000
Hispanic	55,000	66,000	49,000	S	54,600
Asian	48,000	70,000	37,000	34,000	57,000
Other	52,000	S	47,000	S	S
Physical/related scientists,					
total	65,000	73,600	54,000	40,000	72,000
White	66,000	75,000	55,000	40,000	72,100
Black	60,000	67,000	47,000	S	75,000
Hispanic	58,400	63,000	50,000	S	75,000
Asian	60,000	65,000	45,000	S	70,000
Other	50,000	S	S	S	S
Social/related scientists,					
total	54,000	65,000	50,000	51,000	56,000
White	55,000	65,000	51,000	50,000	56,200
Black	50,000	53,000	49,500	S	58,000
Hispanic	48,600	59,000	46,000	S	60,000
Asian	49,000	50,000	49,000	S	46,000
Other	48,000	S	48,000	S	S

See explanatory notes, if any, and SOURCE at end of table.

Appendix table 3-16.

Median annual salaries of U.S. scientists and engineers, by highest degree attained, occupation, race or ethnicity, and employment sector: 1997
(Dollars)

Occupation and race/ethnicity	Employed S&Es, total	Sector of employment			
		Business/ industry	4-yr. college/ university	Other educational institution	Government
Engineers, total	72,000	75,000	65,000	S	70,000
White	73,900	79,000	67,000	S	71,000
Black	67,000	73,500	60,000	S	S
Hispanic	66,100	72,000	60,000	S	S
Asian	70,000	72,000	65,000	S	60,000
Other	72,100	S	S	S	S
Non-S&E occupations,					
total	65,000	75,000	60,000	58,000	71,000
White	66,000	75,000	60,000	58,000	72,000
Black	53,100	55,000	53,100	58,700	52,000
Hispanic	52,000	65,000	52,000	52,000	52,000
Asian	72,000	82,000	60,000	60,000	66,000
Other	55,000	61,300	53,400	S	S
Managers/administrators	83,500	90,000	80,000	73,700	77,400
White	85,000	92,000	80,700	72,100	77,500
Black	71,200	77,900	70,000	S	53,000
Hispanic	65,000	65,000	72,500	S	25,000
Asian	88,100	90,300	76,000	S	61,000
Other	72,100	S	S	S	S
Other non-S&E occupations	52,300	56,200	53,000	45,000	60,900
White	53,000	55,000	53,200	45,000	63,700
Black	42,000	25,000	50,000	36,600	S
Hispanic	52,000	63,000	52,000	S	S
Asian	63,100	72,100	56,000	48,000	66,000
Other	34,000	S	39,000	S	S

S = suppressed for reasons of confidentiality and/or data reliability

^aIncludes professional degrees.

NOTES: The term "Scientists and Engineers" (S&Es) includes all people who have ever received a bachelor's degree or higher in an S&E field, plus people holding a non-S&E bachelor's or higher degree who were employed in an S&E occupation during the 1993, 1995, or 1997 SESTAT surveys. Figures are rounded to nearest hundred. Details may not add to total because of rounding.

SOURCE: National Science Foundation, Division of Science Resources Studies (NSF/SRS), Scientists and Engineers Statistical Data System (SESTAT), 1997.

See figure 3-11 in Volume 1.

Appendix table 3-17.

Median annual salaries of U.S. scientists and engineers, by highest degree attained, broad occupation, race or ethnicity, and years since degree: 1997
(Dollars)

Occupation and race/ethnicity	Employed S&Es, total	Years since degree							
		<5 years	5–9 years	10–14 years	15–19 years	20–24 years	25–29 years	30–34 years	35+ years
All degree levels^a									
All occupations, total	50,000	33,100	45,000	53,000	58,000	58,000	58,000	62,000	60,000
White	50,000	33,000	45,000	54,000	60,000	60,000	60,000	65,000	60,000
Black	40,000	30,000	38,000	40,600	45,000	47,000	49,000	44,000	46,500
Hispanic	44,000	31,000	42,000	50,000	51,000	52,000	50,000	56,500	45,000
Asian	50,000	40,000	50,000	58,000	55,000	56,000	50,000	50,000	49,000
Other	40,000	27,000	43,000	45,000	50,000	46,000	50,000	S	S
S&E occupations, total	55,000	40,000	50,000	58,000	62,000	63,000	66,000	67,000	63,000
White	55,000	40,000	50,000	58,000	62,000	63,000	67,000	68,000	64,000
Black	48,000	38,000	45,000	50,000	54,000	54,000	56,700	45,000	S
Hispanic	50,000	39,000	50,000	58,000	55,000	65,000	60,000	78,000	S
Asian	55,000	46,000	52,000	60,000	62,500	67,000	64,000	60,000	63,800
Other	49,000	30,000	56,000	50,000	54,000	55,000	S	S	S
Scientists, total	52,000	37,400	48,000	55,000	59,000	59,500	62,000	62,000	62,000
White	52,300	36,000	48,000	55,000	60,000	60,000	62,000	63,000	62,000
Black	46,000	35,000	42,000	48,000	52,000	50,000	52,400	S	S
Hispanic	48,000	35,000	48,000	55,000	53,000	55,000	52,500	72,000	S
Asian	53,000	45,000	50,000	61,000	61,000	64,000	60,000	50,000	60,500
Other	40,000	26,500	55,000	40,000	54,000	48,000	S	S	S
Computer/math scientists, total	56,000	46,000	53,000	60,000	60,100	61,000	64,000	63,300	58,000
White	56,800	45,000	53,000	60,000	60,500	62,200	64,000	63,500	60,900
Black	48,000	39,000	45,000	50,000	53,000	53,000	58,000	S	S
Hispanic	53,000	42,500	54,000	55,000	55,000	61,000	S	S	S
Asian	56,000	50,000	55,000	63,000	65,000	62,000	60,000	53,000	S
Other	54,000	S	S	S	S	S	S	S	S
Life/related scientists, total	44,000	27,000	38,000	49,000	51,000	53,000	56,700	56,000	67,300
White	45,000	27,000	36,400	49,000	52,000	53,000	56,000	55,000	67,300
Black	45,900	27,000	45,000	48,000	47,900	47,000	S	S	S
Hispanic	40,000	22,000	35,700	42,500	48,000	49,200	47,000	S	S
Asian	40,000	28,000	42,000	48,000	52,000	65,000	68,000	56,200	S
Other	27,900	25,000	S	S	S	S	S	S	S
Physical/related scientists, total	50,000	32,000	43,000	53,000	59,100	60,000	60,000	70,000	68,000
White	50,000	32,000	44,000	53,000	60,000	60,000	60,000	71,000	71,000
Black	42,000	33,000	41,000	38,000	55,000	52,000	S	S	S
Hispanic	41,300	32,000	37,600	56,000	40,000	51,000	S	S	S
Other	58,000	30,000	S	S	S	S	S	S	S
Social/related scientists, total	45,000	30,000	40,000	50,000	52,000	52,000	60,000	60,000	55,000
White	45,000	30,000	39,500	51,000	53,000	52,000	60,000	60,000	51,500
Black	36,900	25,000	37,000	35,000	55,000	38,000	S	S	S
Hispanic	40,000	30,000	44,000	60,000	45,000	45,000	S	S	S
Asian	44,000	35,000	42,000	55,000	51,000	73,000	S	S	S
Other	30,000	25,000	S	S	S	S	S	S	S
Engineers, total	60,000	44,000	53,300	60,000	65,000	68,000	70,000	71,000	64,000
White	60,000	43,600	53,000	60,000	65,000	68,000	72,000	72,000	64,000
Black	52,000	42,500	52,000	55,000	57,000	67,000	S	S	S
Hispanic	54,000	41,000	53,000	60,000	59,700	68,000	66,000	S	S
Asian	58,000	47,000	55,000	60,000	63,000	70,000	65,000	66,000	65,000
Other	53,000	38,500	S	S	S	S	S	S	S

See explanatory notes, if any, and SOURCE at end of table.

Appendix table 3-17.

Median annual salaries of U.S. scientists and engineers, by highest degree attained, broad occupation, race or ethnicity, and years since degree: 1997
(Dollars)

Occupation and race/ethnicity	Employed S&Es, total	Years since degree							
		<5 years	5-9 years	10-14 years	15-19 years	20-24 years	25-29 years	30-34 years	35+ years
Non-S&E occupations,									
total	46,000	30,000	40,000	50,000	54,000	55,000	52,000	58,000	57,000
White	48,000	30,000	41,600	50,000	56,000	56,000	54,000	60,000	60,000
Black	38,000	28,000	35,000	38,000	42,000	45,000	47,000	42,600	45,000
Hispanic	40,000	28,000	38,000	46,000	50,000	50,000	50,000	50,000	44,000
Asian	42,000	33,000	45,000	52,000	50,000	48,000	41,000	45,000	40,000
Other	36,000	25,000	36,000	42,000	50,000	45,000	48,000	S	S
Managers/administrators	62,000	42,000	53,000	60,000	65,900	67,000	72,000	80,000	72,000
White	64,000	42,000	54,500	60,000	67,000	70,000	74,000	80,000	74,900
Black	50,000	36,000	45,000	45,000	57,000	55,000	56,000	54,000	S
Hispanic	55,000	39,000	54,000	50,000	63,000	60,000	60,000	S	S
Asian	60,000	40,500	50,000	65,000	64,000	60,000	67,000	54,800	49,000
Other	50,900	S	S	56,000	S	S	S	S	S
Other non-S&E occupations	40,000	28,000	37,700	45,000	46,000	48,000	46,000	50,000	50,000
White	40,000	28,000	38,000	46,900	48,000	50,000	47,000	50,000	50,000
Black	35,000	27,000	32,000	36,000	39,000	39,000	43,000	40,000	42,000
Hispanic	36,000	27,000	35,000	43,000	42,000	45,000	46,400	49,000	42,000
Asian	38,700	32,000	43,000	47,000	40,000	39,600	40,000	40,000	35,400
Other	32,000	24,900	36,000	35,000	41,600	35,000	S	S	S
Bachelor's									
All occupations, total	45,000	28,800	40,000	50,000	52,000	50,000	53,000	57,000	55,000
White	45,500	28,500	40,000	50,000	54,000	51,500	55,000	60,000	56,000
Black	36,000	26,000	33,000	38,000	41,000	40,000	45,000	40,000	46,500
Hispanic	40,000	27,000	38,000	48,000	48,000	48,500	50,000	55,000	44,000
Asian	42,300	35,000	43,000	50,000	45,000	48,000	45,000	48,000	40,000
Other	35,000	25,000	37,000	40,000	50,000	46,000	48,000	S	S
S&E occupations,									
total	52,000	37,000	48,000	55,000	60,000	60,000	62,400	65,000	60,000
White	53,000	37,000	48,000	55,000	60,000	60,000	64,000	65,000	60,000
Black	47,500	35,000	45,000	50,000	55,000	53,000	54,000	S	S
Hispanic	49,500	36,000	48,000	56,000	55,000	63,000	S	S	S
Asian	50,000	40,000	48,000	55,000	56,400	59,500	59,000	57,600	53,000
Other	45,000	30,000	S	S	S	S	S	S	S
Scientists, total	50,000	34,000	45,000	53,000	55,000	55,000	58,000	56,000	55,000
White	50,000	33,000	45,000	53,200	56,000	56,000	58,300	60,000	55,000
Black	45,000	32,000	41,000	47,600	53,000	50,000	S	S	S
Hispanic	46,000	30,000	48,000	50,000	53,000	S	S	S	S
Asian	48,000	39,500	45,000	56,000	55,000	52,000	53,000	48,000	S
Other	31,600	25,000	S	S	S	S	S	S	S
Computer/math scientists,									
total	54,000	41,000	50,000	55,000	59,000	59,000	62,000	60,000	57,000
White	55,000	41,000	50,000	55,000	60,000	60,000	62,000	63,300	60,000
Black	47,000	35,000	42,000	50,000	52,000	53,000	S	S	S
Hispanic	50,000	35,000	50,000	55,000	55,000	S	S	S	S
Asian	50,000	45,000	50,000	56,300	58,000	59,500	56,000	S	S
Other	S	S	S	S	S	S	S	S	S
Life/related scientists,									
total	36,000	22,000	31,000	40,000	42,000	46,000	43,000	48,500	S
White	36,000	22,000	30,000	41,000	42,000	46,000	41,200	48,500	S
Black	46,000	S	S	S	S	S	S	S	S
Hispanic	33,000	20,000	S	S	S	S	S	S	S
Asian	35,000	S	S	S	S	S	S	S	S
Other	S	S	S	S	S	S	S	S	S

See explanatory notes, if any, and SOURCE at end of table.

Appendix table 3-17.

Median annual salaries of U.S. scientists and engineers, by highest degree attained, broad occupation, race or ethnicity, and years since degree: 1997
(Dollars)

Occupation and race/ethnicity	Employed S&Es, total	Years since degree							
		<5 years	5–9 years	10–14 years	15–19 years	20–24 years	25–29 years	30–34 years	35+ years
Physical/related scientists,									
total	42,000	27,300	37,000	44,000	52,000	52,000	54,000	57,000	52,000
White	42,800	27,000	37,000	47,400	52,000	52,000	55,000	64,000	57,000
Black	41,000	31,000	S	S	S	S	S	S	S
Hispanic	34,000	S	S	S	S	S	S	S	S
Asian	40,000	30,000	S	S	S	S	S	S	S
Other	S	S	S	S	S	S	S	S	S
Social/related scientists,									
total	25,000	21,000	25,000	S	S	S	S	S	S
White	25,000	20,000	25,000	S	S	S	S	S	S
Black	27,500	S	S	S	S	S	S	S	S
Hispanic	22,500	22,500	S	S	S	S	S	S	S
Asian	S	S	S	S	S	S	S	S	S
Other	S	S	S	S	S	S	S	S	S
Engineers, total									
total	55,000	40,000	50,000	56,000	62,300	65,000	68,000	70,000	62,000
White	56,700	40,000	50,000	57,000	63,000	65,000	70,000	70,000	62,000
Black	50,000	40,000	50,000	53,400	56,000	S	S	S	S
Hispanic	52,000	40,000	48,000	60,000	57,200	66,700	S	S	S
Asian	51,000	40,000	48,000	53,500	59,000	65,000	60,000	60,000	61,000
Other	53,000	S	S	S	S	S	S	S	S
Non-S&E occupations,									
total	40,000	25,000	35,000	44,000	46,000	47,000	50,000	51,000	50,000
White	40,000	25,000	35,000	45,000	48,000	48,000	50,000	54,000	52,000
Black	33,000	25,000	31,000	35,000	37,000	39,000	41,700	40,000	44,000
Hispanic	35,000	25,000	34,200	42,000	43,000	45,000	50,000	49,000	42,000
Asian	36,500	29,000	36,000	43,800	37,000	40,000	38,000	44,300	35,400
Other	31,000	23,000	S	32,000	S	45,000	S	S	S
Managers/administrators	56,000	33,000	44,000	52,000	60,000	60,000	70,000	75,000	70,000
White	60,000	32,500	45,000	53,000	63,000	60,000	70,000	79,000	72,000
Black	45,000	34,000	35,900	40,800	48,000	50,000	52,000	S	S
Hispanic	49,500	33,000	43,000	49,200	64,000	60,000	S	S	S
Asian	50,000	35,000	42,000	53,000	55,000	60,000	53,000	60,000	S
Other	46,000	S	S	S	S	S	S	S	S
Other non-S&E occupations ...	35,000	25,000	32,400	38,900	40,000	40,000	40,000	44,000	41,000
White	35,000	25,000	32,500	40,000	40,000	40,000	40,000	45,000	42,000
Black	30,000	24,000	30,000	34,800	33,000	35,000	38,000	36,000	42,000
Hispanic	30,200	25,000	32,000	35,000	40,000	39,000	50,000	49,000	S
Asian	35,000	28,000	35,000	40,000	35,300	38,000	36,500	40,000	33,000
Other	29,000	22,000	S	30,800	S	33,600	S	S	S
Master's									
All occupations, total	53,000	42,000	52,000	56,000	60,000	60,000	58,000	62,000	60,000
White	54,000	41,000	52,500	56,000	60,000	61,500	59,200	63,000	60,000
Black	45,000	36,000	45,000	45,000	45,000	51,000	50,000	S	S
Hispanic	50,000	38,500	54,000	50,000	54,000	56,000	50,000	S	S
Asian	55,000	48,000	55,000	63,000	60,000	62,300	60,000	56,000	70,000
Other	45,000	32,000	51,000	S	S	S	S	S	S
S&E occupations,									
total	59,000	47,500	57,000	63,000	65,000	65,300	69,000	67,700	69,000
White	60,000	46,000	57,000	63,000	65,000	65,500	69,000	69,700	69,000
Black	48,000	43,000	50,000	47,800	52,000	60,000	S	S	S
Hispanic	55,000	46,500	58,000	60,000	55,000	65,000	S	S	S
Asian	59,000	50,000	57,500	65,600	64,900	69,000	68,500	67,700	S
Other	50,000	S	S	S	S	S	S	S	S

See explanatory notes, if any, and SOURCE at end of table.

Appendix table 3-17.

Median annual salaries of U.S. scientists and engineers, by highest degree attained, broad occupation, race or ethnicity, and years since degree: 1997
(Dollars)

Occupation and race/ethnicity	Employed S&Es, total	Years since degree							
		<5 years	5–9 years	10–14 years	15–19 years	20–24 years	25–29 years	30–34 years	35+ years
Scientists, total	54,000	43,000	52,000	60,000	60,000	59,900	61,000	60,000	67,300
White	54,000	40,000	52,000	60,000	60,000	59,900	61,000	62,000	67,300
Black	43,000	35,000	42,300	47,000	48,500	52,000	S	S	S
Hispanic	50,000	45,000	50,000	S	S	S	S	S	S
Asian	57,000	50,000	57,000	66,000	66,000	65,000	63,000	S	S
Other	42,000	S	S	S	S	S	S	S	S
Computer/math scientists,									
total	60,000	52,000	60,000	67,000	65,000	66,000	70,000	63,500	S
White	61,000	52,000	60,000	68,000	65,000	68,000	70,000	63,500	S
Black	52,000	47,000	54,600	S	S	S	S	S	S
Hispanic	59,500	55,000	S	S	S	S	S	S	S
Asian	60,000	53,000	61,000	67,500	67,000	68,000	S	S	S
Other	S	S	S	S	S	S	S	S	S
Life/related scientists,									
total	42,000	31,000	36,400	43,800	47,000	52,000	52,000	S	S
White	42,000	32,000	35,000	44,500	48,000	52,000	52,000	S	S
Black	39,000	S	S	S	S	S	S	S	S
Hispanic	33,000	S	S	S	S	S	S	S	S
Asian	39,000	28,000	44,000	S	S	S	S	S	S
Other	S	S	S	S	S	S	S	S	S
Physical/related scientists,									
total	51,000	35,000	46,000	57,600	61,600	60,000	52,200	70,000	S
White	52,000	36,000	51,000	56,000	64,900	62,000	52,200	70,000	S
Black	41,000	S	S	S	S	S	S	S	S
Hispanic	47,500	S	S	S	S	S	S	S	S
Asian	44,000	35,000	30,000	S	S	S	S	S	S
Other	S	S	S	S	S	S	S	S	S
Social/related scientists,									
total	41,100	30,000	37,000	46,000	47,500	48,000	54,000	60,000	S
White	42,000	30,000	36,000	47,000	47,500	48,000	54,000	S	S
Black	35,000	25,000	S	S	S	S	S	S	S
Hispanic	45,000	32,000	S	S	S	S	S	S	S
Asian	38,000	S	S	S	S	S	S	S	S
Other	S	S	S	S	S	S	S	S	S
Engineers, total	63,600	50,000	60,000	68,900	70,000	74,000	75,000	78,500	76,500
White	65,000	52,000	60,000	69,000	70,000	74,000	78,000	78,500	84,000
Black	58,000	50,000	60,000	S	S	S	S	S	S
Hispanic	58,500	49,000	60,000	62,000	S	S	S	S	S
Asian	60,000	48,000	58,000	65,600	62,700	70,000	71,500	70,000	S
Other	55,000	S	S	S	S	S	S	S	S
Non-S&E occupations,									
total	50,000	38,000	50,000	50,000	54,000	58,500	52,200	60,000	55,000
White	50,500	38,500	50,000	50,400	56,400	60,000	54,000	60,000	56,000
Black	44,000	35,000	43,000	43,000	45,000	50,000	50,000	S	S
Hispanic	46,000	36,000	48,000	46,000	53,100	55,000	S	S	S
Asian	50,000	42,000	50,000	60,000	54,000	50,000	47,900	50,000	S
Other	42,000	30,000	S	S	S	S	S	S	S
Managers/administrators	68,000	55,000	65,000	65,000	69,000	77,000	75,000	87,000	80,000
White	70,000	55,000	65,000	66,500	70,000	80,000	75,000	95,000	80,000
Black	54,700	42,000	55,000	47,000	60,000	60,000	S	S	S
Hispanic	60,000	55,000	66,000	52,000	59,800	60,000	S	S	S
Asian	65,000	52,000	70,000	67,500	72,000	60,000	67,000	S	S
Other	53,500	S	S	S	S	S	S	S	S

See explanatory notes, if any, and SOURCE at end of table.

Appendix table 3-17.

Median annual salaries of U.S. scientists and engineers, by highest degree attained, broad occupation, race or ethnicity, and years since degree: 1997
(Dollars)

Occupation and race/ethnicity	Employed S&Es, total	Years since degree							
		<5 years	5–9 years	10–14 years	15–19 years	20–24 years	25–29 years	30–34 years	35+ years
Other non-S&E occupations	42,000	34,000	41,600	43,000	45,000	46,500	48,000	46,000	36,000
White	42,000	34,000	42,000	43,000	45,000	47,500	49,000	47,500	42,000
Black	40,000	34,000	36,500	40,000	40,000	44,400	45,000	S	S
Hispanic	39,000	33,000	38,000	43,000	50,400	52,000	S	S	S
Asian	42,000	40,000	46,000	48,200	42,000	40,000	45,000	S	S
Other	37,000	S	S	S	S	S	S	S	S
Doctorate									
All occupations, total	63,000	42,500	56,000	62,000	70,000	74,100	76,000	80,000	79,000
White	63,400	41,000	56,000	62,000	70,000	74,000	76,000	80,000	79,000
Black	54,000	42,000	56,000	50,000	58,700	69,000	75,000	S	S
Hispanic	55,000	42,000	52,000	60,000	60,000	70,000	70,000	59,000	S
Asian	65,000	48,000	60,000	70,000	74,000	80,800	78,000	79,500	80,000
Other	52,000	38,000	40,000	48,000	70,000	60,000	S	S	S
S&E occupations, total	62,000	43,600	56,000	62,000	70,000	71,700	73,300	78,000	79,000
White	62,000	41,100	55,000	61,000	68,800	70,000	73,700	78,000	79,000
Black	55,000	42,000	52,000	55,600	58,000	65,500	71,000	S	S
Hispanic	55,900	42,000	54,600	58,000	60,000	68,000	66,100	S	S
Asian	62,000	50,000	58,000	70,000	75,000	78,000	75,000	81,000	84,000
Other	50,000	40,000	50,000	45,000	S	58,000	S	S	S
Scientists, total	60,000	40,000	52,000	60,000	66,000	69,000	70,000	75,000	78,000
White	60,000	38,900	52,000	60,000	66,000	68,000	70,000	75,000	78,000
Black	53,000	42,000	49,700	55,000	58,000	64,000	71,000	S	S
Hispanic	52,000	42,000	50,000	56,000	56,000	68,000	57,000	S	S
Asian	56,000	42,000	50,000	65,300	70,000	74,000	70,000	72,000	84,000
Other	49,000	40,000	38,000	45,000	S	S	S	S	S
Computer/math scientists, total	65,000	55,000	65,000	65,000	70,000	69,000	69,000	70,000	76,400
White	65,000	50,000	65,000	60,800	70,000	68,000	69,000	72,000	75,000
Black	63,000	79,800	S	S	S	S	S	S	S
Hispanic	55,000	50,000	68,000	55,000	S	64,000	S	S	S
Asian	65,000	59,800	65,000	70,000	80,000	71,000	62,100	S	S
Other	S	S	S	S	S	S	S	S	S
Life/related scientists, total	57,500	30,000	50,000	60,000	66,900	68,100	72,000	75,000	78,000
White	59,000	31,500	50,000	60,000	66,000	67,800	72,100	75,000	75,000
Black	54,000	32,000	49,000	60,000	72,100	65,500	S	S	S
Hispanic	55,000	35,000	52,000	56,000	76,000	S	S	S	S
Asian	48,000	28,800	43,000	60,000	70,000	72,000	70,000	71,400	S
Other	52,000	30,000	S	S	S	S	S	S	S
Physical/related scientists, total	65,000	44,500	55,000	65,000	74,900	75,000	75,000	80,000	80,000
White	66,000	43,000	55,000	65,000	75,000	75,000	75,000	80,000	80,000
Black	60,000	48,000	47,000	52,000	75,000	75,000	S	S	S
Hispanic	58,400	42,000	55,000	60,000	S	75,000	S	S	S
Asian	60,000	48,000	53,000	65,000	72,000	74,000	71,000	S	S
Other	50,000	S	S	S	S	S	S	S	S

See explanatory notes, if any, and SOURCE at end of table.

Appendix table 3-17.

Median annual salaries of U.S. scientists and engineers, by highest degree attained, broad occupation, race or ethnicity, and years since degree: 1997
(Dollars)

Occupation and race/ethnicity	Employed S&Es, total	Years since degree							
		<5 years	5–9 years	10–14 years	15–19 years	20–24 years	25–29 years	30–34 years	35+ years
Social/related scientists,									
total	54,000	40,000	48,500	57,000	60,000	63,000	65,000	70,000	72,100
White	55,000	39,000	49,000	57,000	60,000	63,000	65,000	70,000	72,300
Black	50,000	42,000	50,000	50,000	58,000	56,500	S	S	S
Hispanic	48,600	39,000	46,200	55,000	56,000	S	S	S	S
Asian	49,000	44,000	48,000	55,000	50,000	90,000	S	S	S
Other	48,000	40,000	S	S	S	S	S	S	S
Engineers, total									
total	72,000	60,000	68,500	74,000	80,000	85,000	85,000	85,000	83,000
White	73,900	60,000	68,500	74,000	80,100	85,100	85,000	85,000	83,000
Black	67,000	50,000	67,000	S	S	S	S	S	S
Hispanic	66,100	50,300	72,100	60,000	S	68,000	S	S	S
Asian	70,000	60,000	68,000	74,900	80,100	85,000	80,100	S	S
Other	72,100	S	S	S	S	S	S	S	S
Non-S&E occupations,									
total	65,000	41,000	59,000	65,000	70,000	77,700	87,000	94,000	78,000
White	66,000	41,000	58,000	64,300	72,000	78,000	87,000	98,000	80,000
Black	53,100	45,000	62,000	42,700	58,700	74,000	S	S	S
Hispanic	52,000	44,000	46,800	75,000	77,500	72,000	S	S	S
Asian	72,000	40,500	67,000	84,200	72,000	98,000	94,000	72,000	S
Other	55,000	32,000	S	S	S	S	S	S	S
Managers/administrators									
total	83,500	60,000	72,000	80,100	85,000	90,000	97,200	105,000	90,000
White	85,000	61,000	72,000	82,800	89,000	90,000	97,500	110,000	92,000
Black	71,200	61,900	71,300	50,000	77,900	95,000	S	S	S
Hispanic	65,000	50,000	70,000	50,000	60,000	96,000	S	S	S
Asian	88,100	50,000	75,000	90,000	80,000	100,000	95,000	S	S
Other	72,100	S	S	S	S	S	S	S	S
Other non-S&E occupations									
total	52,300	37,000	50,000	53,000	58,000	65,000	75,000	73,000	62,500
White	53,000	38,000	50,000	53,000	58,000	65,000	74,600	80,000	63,000
Black	42,000	36,600	50,400	40,000	50,000	40,000	S	S	S
Hispanic	52,000	38,000	42,500	80,000	S	S	S	S	S
Asian	63,100	38,000	60,000	71,000	65,000	80,000	78,000	S	S
Other	34,000	S	S	S	S	S	S	S	S

S = suppressed for reasons of confidentiality and/or data reliability

^aIncludes professional degrees.

NOTES: The term "Scientists and Engineers" (S&Es) includes all people who have ever received a bachelor's degree or higher in an S&E field, plus people holding a non-S&E bachelor's or higher degree who were employed in an S&E occupation during the 1993, 1995, or 1997 SESTAT surveys. Figures are rounded to nearest hundred. Details may not add to total because of rounding.

SOURCE: National Science Foundation, Division of Science Resources Studies (NSF/SRS), Scientists and Engineers Statistical Data System (SESTAT), 1997.

See page 3-13 in Volume 1.

Appendix table 3-18.

Number, employment status, and median salary of 1995 and 1996 bachelor's and master's degree recipients, by field of degree: 1997

Degree field	Education and employment status (percentage distribution)					Median salary FT employed graduates ^b (Dollars)
	Graduates 1995 and 1996 ^a (thousands)	Not full-time status			Employed in science or engineering	
		Full-time students	Employed in other occupations	Not employed and not FT student		
Bachelor's degree recipients						
Science and engineering	708.9	21	21	53	5	28,200
All sciences	593.8	23	12	60	5	26,000
Computer and information sciences	41.0	6	57	34	3	37,700
Mathematical sciences	26.8	19	15	63	3	29,800
Life and related sciences	139.0	31	11	53	5	22,800
Physical and related sciences	36.6	38	26	33	3	27,300
Psychology	138.0	24	6	65	5	22,300
Social and related sciences	212.4	18	6	70	6	26,400
All engineering	115.1	13	65	18	3	37,700
Aerospace and related engineering	3.0	22	48	27	2	34,000
Chemical engineering	11.6	17	65	14	4	39,300
Civil and architectural engineering	20.7	14	63	20	3	34,400
Electrical, electronics, computer, and communications engineering	32.9	10	70	16	4	40,500
Industrial engineering	5.8	8	66	24	2	37,600
Mechanical engineering	27.9	11	71	15	3	38,200
Other engineering	13.2	21	52	25	3	34,100
Master's degree recipients						
Science and engineering	149.5	21	49	27	3	41,500
All sciences	102.5	23	36	36	4	37,200
Computer & information sciences	18.2	6	74	18	2	51,200
Mathematical sciences	7.9	27	37	32	3	39,700
Life and related sciences	15.3	32	37	27	4	32,400
Physical and related sciences	9.7	37	42	18	3	33,600
Psychology	26.4	22	29	43	5	29,700
Social and related sciences	25.1	26	15	54	5	35,000
All engineering	47.0	15	75	9	2	49,900
Aerospace and related engineering	1.5	31	54	15	0 ^c	48,800
Chemical engineering	2.0	33	61	4	2	47,600
Civil and architectural engineering	6.5	11	76	11	1	41,900
Electrical, electronics, computer, and communications engineering	1.6	15	77	7	1	55,000
Industrial engineering	3.2	13	70	16	1	49,900
Mechanical engineering	7.2	16	72	10	2	47,700
Other engineering	10.4	10	78	9	4	49,000

^aIncludes people who received a bachelor's or master's degree in science or engineering from a U.S. college or university from July 1994 through June 1996.

^bSalary for self-employed and full-time students is not included in data represented in this table. Median salaries are rounded to the nearest hundred dollars.

^cWhile the observed value in the survey data set is 0 (zero) percent, it is possible that some persons in the true population have this characteristic.

NOTES: For graduates with more than one eligible degree at the same level (bachelor's/master's), this analysis uses the degree for which the graduate was sampled. Details may not sum to totals because of rounding. Percentages were calculated on unrounded data.

SOURCE: National Science Foundation, Division of Science Resources Studies (NSF/SRS), *National Survey of Recent College Graduates, 1997*.

See page 3-14 in Volume 1.

Appendix table 3-19.

Number of U.S. scientists and engineers in the labor force, by sex, race/ethnicity, and age: 1997

Characteristics	All ages	Age									
		Under 25	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+
All degree levels											
Total	10,779,300	478,500	1,243,600	1,293,600	1,559,300	1,728,400	1,770,000	1,359,600	781,100	432,100	340,900
Male	7,151,100	226,500	671,400	825,700	1,006,400	1,110,000	1,223,500	969,800	599,500	344,400	279,400
Female	3,628,200	252,000	572,200	467,900	553,000	618,400	546,500	389,800	181,600	87,700	61,500
Hispanic	381,600	29,000	65,800	58,600	68,200	56,000	49,700	31,500	21,000	9,300	7,700
White	9,025,600	376,400	991,300	1,044,200	1,277,500	1,455,300	1,509,300	1,178,400	669,300	377,500	307,200
Black	570,000	29,400	73,900	68,100	86,500	93,700	99,400	60,800	38,400	19,600	14,200
Asian	765,400	40,100	107,500	119,100	121,600	117,000	106,800	84,400	49,500	24,500	11,000
American Indian	32,800	3,600	5,100	3,400	4,700	4,900	4,200	3,900	2,900	1,100	800
Other	3,900	NA	NA	200	900	1,500	500	600	NA	200	NA
Bachelor's											
Total	6,318,900	456,200	1,000,200	850,200	918,800	983,800	934,100	644,900	349,100	203,800	169,800
Male	4,129,000	215,300	545,100	547,000	602,200	631,400	653,200	458,900	270,800	159,300	143,400
Female	2,189,900	240,900	455,100	303,200	316,600	352,300	280,900	186,000	78,300	44,500	26,300
Hispanic	244,600	27,900	54,700	41,000	42,200	32,900	26,300	14,900	11,100	4,500	3,400
White	5,306,500	359,700	804,400	705,900	761,900	834,300	796,200	559,700	294,200	182,100	156,700
Black	355,800	28,100	61,600	48,700	58,600	56,100	58,200	26,800	18,700	6,800	5,200
Asian	387,700	36,800	74,800	52,400	52,700	56,300	50,300	40,600	23,700	9,900	4,200
American Indian	22,200	3,600	4,700	2,000	3,200	3,100	2,700	2,400	1,400	400	300
Other	2,100	NA	NA	200	200	1,000	300	500	NA	NA	NA
Master's											
Total	2,872,100	21,400	183,000	292,900	402,800	466,200	533,700	481,300	272,600	137,400	96,000
Male	1,830,400	10,700	93,300	179,000	247,100	279,200	337,400	325,900	191,500	104,100	69,400
Female	1,041,700	10,600	89,700	113,900	155,700	186,900	196,300	155,400	81,000	33,300	26,600
Hispanic	90,900	1,100	7,900	11,600	17,100	14,700	16,200	11,400	6,300	3,300	2,000
White	2,371,900	15,900	138,900	221,300	323,800	384,400	449,300	413,800	233,200	117,500	84,900
Black	154,200	1,300	9,200	13,700	20,100	28,100	29,900	24,300	15,300	7,300	6,100
Asian	246,900	3,100	26,700	45,400	40,600	37,200	37,100	30,800	16,800	8,700	2,700
American Indian	7,300	NA	400	900	900	1,400	1,200	900	900	400	300
Other	900	NA	NA	NA	300	400	NA	100	NA	200	NA
Doctorate											
Total	705,800	NA	10,000	58,900	94,800	104,600	117,600	124,900	104,500	50,200	40,300
Male	535,100	NA	6,500	39,700	66,700	74,400	85,600	95,000	88,800	43,900	34,400
Female	170,700	NA	3,500	19,100	28,200	30,200	32,000	29,800	15,800	6,300	5,900
Hispanic	19,400	NA	NA	1,800	3,500	2,700	3,600	3,200	2,500	1,200	1000
White	569,600	NA	8,000	41,300	68,300	81,600	96,600	106,100	91,200	41,600	35,000
Black	21,900	NA	100	900	2,400	3,400	4,400	4,700	2,400	2,500	1,000
Asian	92,700	NA	1,900	14,600	20,500	16,600	12,700	10,500	8,000	4,800	3,200
American Indian	2,000	NA	NA	200	100	300	300	400	500	100	100
Other	200	NA	NA	NA	100	100	NA	NA	NA	NA	NA

NA = data not available

SOURCE: National Science Foundation, Division of Science Resources Studies (NSF/SRS), Scientists and Engineers Statistical Data System (SESTAT), 1997.

See figure 3-12 in Volume 1.

Appendix table 3-20.

**S&E degree holders working through a temporary help or employment agency (percent):
1997**

Years since degree	Other jobs	S&E jobs
1-5	1.2	0.5
6-10	0.6	0.4
11-15	0.3	0.3
16-20	0.2	0.3
21-25	0.5	0.2
31-35	0.9	0.2
36+	1.0	0.7

SOURCE: National Science Foundation, Division of Science Resources Studies (NSF/SRS), Scientists and Engineers Statistical Data System (SESTAT), 1997.

See figure 3-3 in Volume 1.

Appendix table 3-21.

S&E trained U.S. scientists and engineers in the labor force, by degree level, tenure status at four-year educational institutions, and age: 1997

Field of highest degree	S&E trained, total	Age									
		Under 25	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+
All degree levels											
All science & engineering	7,854,500	268,100	1,115,500	1,005,100	1,106,500	1,201,700	1,182,800	903,900	541,600	293,600	235,800
Engineering	1,944,100	37,900	226,000	282,200	342,800	283,100	233,100	204,400	144,800	105,000	84,700
Aerospace engineering	78,100	1,200	9,800	11,600	14,400	9,900	9,300	9,300	7,200	3,400	2,000
Chemical engineering	140,300	4,800	17,300	18,900	25,500	17,600	19,300	16,400	10,300	6,200	4,000
Civil engineering	328,000	5,400	35,500	38,200	51,600	51,500	47,000	36,200	24,100	21,400	17,000
Electrical engineering	593,700	9,500	70,900	100,000	106,500	93,900	65,100	59,600	43,500	25,300	19,400
Industrial engineering	107,900	1,900	14,000	17,400	19,400	13,400	13,300	9,500	7,900	5,200	6,000
Mechanical engineering	392,100	10,100	50,800	60,300	70,600	47,000	40,600	39,500	26,700	25,600	20,900
Other engineering	304,000	5,100	27,700	35,800	54,800	49,800	38,400	33,900	25,100	17,800	15,500
Life sciences	1,228,000	50,400	166,300	132,000	162,100	235,700	199,800	135,000	80,000	34,700	32,100
Agriculture	222,500	4,800	22,400	20,500	41,800	47,500	32,400	19,400	14,800	8,400	10,400
Biological sciences	907,100	42,400	129,700	102,800	106,200	166,400	149,900	106,400	59,800	23,400	20,100
Health/medical	98,400	3,100	14,100	8,700	14,100	21,900	17,500	9,100	5,400	2,900	1,600
Computer math sciences	1,020,000	21,900	124,600	178,700	185,700	154,100	141,000	118,000	59,400	25,600	11,000
Computer sciences	553,300	10,600	73,800	124,400	136,200	94,200	59,100	34,900	15,800	3,400	800
Mathematical sciences	466,700	11,200	50,800	54,300	49,600	59,900	81,900	83,100	43,600	22,200	10,200
Physical sciences	631,600	15,800	63,300	66,700	90,000	96,800	95,600	73,100	66,100	33,300	30,800
Chemistry	281,800	8,300	29,000	29,200	34,100	40,300	41,300	37,400	34,900	12,400	14,900
Geosciences	149,600	3,600	13,000	15,400	29,500	30,200	23,200	12,300	8,100	8,200	6,200
Physics/astronomy	146,700	3,100	15,500	17,900	18,300	17,000	20,500	19,100	18,700	9,700	7,000
Other physical sciences	53,400	800	5,800	4,300	8,000	9,400	10,600	4,300	4,400	3,000	2,700
Social sciences	3,030,900	142,200	535,300	345,400	325,900	432,000	513,300	373,500	191,200	94,900	77,100
Economics	409,100	15,900	68,300	62,400	49,400	54,200	60,100	36,100	30,300	19,800	12,800
Political sciences	572,400	32,800	121,900	86,300	72,900	72,100	70,600	58,000	29,400	13,300	15,100
Psychology	1,136,800	57,600	198,300	116,900	117,000	176,700	199,100	142,900	68,900	31,900	27,400
Sociology/anthropology	571,100	22,300	97,500	45,400	51,600	81,500	119,600	86,000	38,100	18,200	11,000
Other social sciences	341,500	13,700	49,300	34,400	35,100	47,400	64,000	50,600	24,500	11,700	10,800
Bachelor's											
All science & engineering	5,800,700	263,900	990,000	782,900	821,600	873,500	830,100	577,200	318,100	185,500	157,900
Engineering	1,407,700	36,700	183,300	204,300	248,300	200,400	161,500	136,900	94,400	73,100	68,800
Aerospace engineering	55,700	1,100	7,800	8,900	10,600	7,600	6,500	5,800	4,800	1,300	1,300
Chemical engineering	103,700	4,700	15,200	14,700	19,200	12,700	13,800	10,600	6,500	3,600	2,500
Civil engineering	248,500	5,100	29,700	29,900	39,300	38,400	35,200	24,700	15,800	15,400	14,900
Electrical engineering	422,500	9,000	56,300	69,300	72,500	66,800	45,800	40,200	29,500	17,800	15,300
Industrial engineering	81,700	1,900	11,500	13,300	14,600	9,500	9,400	6,700	5,900	4,400	4,600
Mechanical engineering	313,000	9,900	43,000	47,700	56,500	36,300	30,000	31,200	21,200	19,400	17,900
Other engineering	182,600	5,000	19,700	20,500	35,600	29,100	20,800	17,700	10,800	11,100	12,300
Life sciences	901,700	49,900	154,100	100,700	117,100	178,000	138,200	82,500	41,900	19,800	19,400
Agriculture	178,200	4,800	20,200	16,000	36,900	38,100	23,300	14,100	10,100	6,500	8,200
Biological sciences	647,700	42,000	120,600	78,100	70,100	123,300	101,900	61,800	29,000	11,200	9,700
Health/medical	75,800	3,100	13,300	6,600	10,100	16,600	12,900	6,600	2,800	2,200	1,500
Computer math sciences	733,000	20,900	105,500	142,900	138,700	106,900	91,500	72,200	33,000	14,800	6,600
Computer sciences	391,400	10,000	61,300	100,500	101,800	62,500	29,800	17,300	7,100	1,000	200
Mathematical sciences	341,600	10,900	44,200	42,400	37,000	44,400	61,700	54,900	25,900	13,800	6,500
Physical sciences	389,900	15,500	53,300	41,200	55,900	60,800	57,500	38,100	31,900	18,500	17,100
Chemistry	180,400	8,200	25,200	18,800	20,100	24,900	25,600	22,800	18,600	7,100	8,800
Geosciences	98,300	3,500	10,600	10,600	21,500	20,900	13,200	6,200	2,900	5,100	3,800
Physics/astronomy	70,200	3,000	12,000	8,600	8,500	8,000	10,200	6,200	7,900	3,900	2,000
Other physical sciences	41,000	800	5,500	3,200	5,900	6,900	8,500	2,900	2,500	2,400	2,500
Social sciences	2,368,500	141,000	493,800	293,700	261,600	327,500	381,500	247,400	116,900	59,300	46,000
Economics	342,500	15,700	64,900	55,700	40,000	44,800	46,900	26,800	23,700	14,200	9,900
Political sciences	489,000	32,600	113,900	77,800	63,700	58,600	57,500	43,300	22,700	9,200	9,600
Psychology	768,800	57,300	175,600	92,200	83,400	115,000	123,300	68,200	27,700	13,800	12,400
Sociology/anthropology	507,000	21,900	94,700	40,900	45,500	71,900	106,400	74,000	28,900	14,900	7,900
Other social sciences	261,200	13,500	44,700	27,100	29,100	37,300	47,400	35,000	13,900	7,200	6,100

See explanatory notes, if any, and SOURCE at end of table.

Appendix table 3-21.

S&E trained U.S. scientists and engineers in the labor force, by degree level, tenure status at four-year educational institutions, and age: 1997

Field of highest degree	S&E trained, total	Age									
		Under 25	25–29	30–34	35–39	40–44	45–49	50–54	55–59	60–64	65+
Master's											
All science & engineering	1,457,000	4,200	116,200	167,600	200,700	233,700	251,700	225,900	141,900	68,400	46,700
Engineering	436,600	1,200	40,300	66,100	76,800	67,800	59,600	53,400	36,200	23,800	11,400
Aerospace engineering	18,300	100	1,900	2,100	3,100	2,100	2,200	2,800	1,800	1,600	600
Chemical engineering	23,200	100	1,800	2,600	3,800	2,900	4,200	3,800	1,700	1,500	900
Civil engineering	70,100	200	5,700	7,500	10,800	11,700	10,800	10,000	6,600	5,300	1,500
Electrical engineering	144,600	500	13,700	26,900	29,000	22,800	16,700	15,600	10,700	5,700	3,100
Industrial engineering	22,900	NA	2,500	3,600	4,000	3,400	3,600	2,500	1,400	600	1,200
Mechanical engineering	67,000	200	7,500	11,100	11,800	8,600	8,900	6,800	4,300	5,500	2,300
Other engineering	90,600	100	7,200	12,400	14,300	16,300	13,200	11,900	9,700	3,700	1,900
Life sciences	159,800	400	9,800	16,600	21,700	27,100	30,600	25,900	18,000	5,400	4,300
Agriculture	27,300	NA	2,200	3,500	2,600	5,700	5,900	3,100	2,000	900	1,300
Biological sciences	114,800	400	6,900	11,100	15,800	17,100	21,200	21,300	14,100	4,000	3,000
Health/medical	17,700	NA	700	1,900	3,300	4,400	3,500	1,500	1,900	400	NA
Computer math sciences	249,600	1000	18,200	31,800	41,500	41,600	43,400	39,100	21,300	8,700	3,000
Computer sciences	151,900	600	12,200	22,300	31,800	29,600	27,200	16,600	8,600	2,400	600
Mathematical sciences	97,600	400	6,000	9,500	9,600	12,000	16,200	22,500	12,700	6,300	2,400
Physical sciences	117,000	300	8,200	12,400	15,500	18,600	20,400	15,200	14,700	5,300	6,300
Chemistry	37,600	100	2,600	3,500	4,200	6,100	6,500	5,800	6,000	800	2,000
Geosciences	34,800	100	2,300	3,800	5,600	6,900	7,300	2,600	3,000	1,600	1,700
Physics/astronomy	34,000	100	3,000	4,100	4,100	3,300	4,900	5,700	3,900	2,300	2,500
Other physical sciences	10,600	NA	300	1,000	1,700	2,200	1,800	1,100	1,800	500	200
Social sciences	494,100	1,300	39,800	40,700	45,200	78,600	97,600	92,400	51,800	25,100	21,600
Economics	44,900	200	3,100	5,000	6,600	6,400	9,100	5,300	3,500	4,400	1,400
Political sciences	66,600	200	8,000	7,500	7,700	11,400	10,500	11,100	3,500	2,700	4,100
Psychology	276,100	300	21,500	18,400	22,700	45,800	57,000	55,800	31,800	12,600	10,200
Sociology/ anthropology	41,000	400	2,700	3,500	3,900	6,700	7,900	7,200	5,200	1,700	1,800
Other social sciences	65,400	200	4,500	6,400	4,400	8,300	13,200	12,900	7,900	3,600	4,100
Doctorate											
All science & engineering	588,400	NA	9,100	53,600	82,700	93,000	99,700	98,800	81,300	39,200	31,000
Engineering	99,600	NA	2,500	11,800	17,700	14,800	12,000	14,000	14,300	8,100	4,500
Aerospace engineering	4,000	NA	200	600	700	200	600	700	600	500	100
Chemical engineering	13,500	NA	300	1,600	2,500	1,900	1,400	1,900	2,200	1,100	500
Civil engineering	9,500	NA	100	800	1,600	1,400	1,000	1,600	1,600	700	600
Electrical engineering	26,600	NA	900	3,800	5,000	4,300	2,700	3,700	3,400	1,900	1,000
Industrial engineering	3,300	NA	0	500	800	500	300	300	600	100	200
Mechanical engineering	12,000	NA	200	1,500	2,300	2,100	1,700	1,500	1,300	700	700
Other engineering	30,700	NA	700	3,000	4,800	4,300	4,500	4,400	4,600	3,100	1,300
Life sciences	165,400	NA	2,100	14,100	23,100	30,600	30,900	26,500	20,100	9,500	8,400
Agriculture	17,100	NA	NA	1,000	2,300	3,800	3,200	2,100	2,700	1,000	900
Biological sciences	143,700	NA	2,100	13,000	20,300	25,900	26,700	23,400	16,700	8,300	7,400
Health/medical	4,600	NA	NA	100	500	1,000	1,000	1,000	700	300	100
Computer math sciences	37,200	NA	1,000	4,000	5,500	5,600	6,000	6,600	5,100	2,100	1,400
Computer sciences	9,700	NA	300	1,600	2,600	2,100	2,000	900	200	NA	NA
Mathematical sciences	27,500	NA	700	2,300	2,900	3,500	4,000	5,700	5,000	2,100	1,300
Physical sciences	124,100	NA	1,800	12,800	18,600	17,500	17,700	19,500	19,400	9,500	7,400
Chemistry	63,800	NA	1,200	6,800	9,800	9,300	9,200	8,800	10,200	4,400	4,100
Geosciences	16,400	NA	100	900	2,500	2,400	2,700	3,500	2,200	1,500	700
Physics/astronomy	42,100	NA	500	5,000	5,800	5,600	5,500	6,900	6,900	3,500	2,600
Other physical sciences	1,800	NA	NA	100	500	300	300	300	100	100	NA
Social sciences	162,000	NA	1,700	10,900	17,900	24,500	33,100	32,200	22,300	10,100	9,300
Economics	21,700	NA	400	1,700	2,800	3,000	4,100	3,900	3,100	1,200	1,500
Political sciences	16,800	NA	100	1,000	1,500	2,200	2,600	3,600	3,200	1,300	1,300
Psychology	85,600	NA	1,200	6,300	9,700	14,600	17,700	17,300	9,200	5,100	4,600
Sociology/ anthropology	23,200	NA	100	900	2,200	2,900	5,400	4,800	4,100	1,600	1,300
Other social sciences	14,800	NA	NA	1,000	1,700	1,900	3,400	2,600	2,700	900	600

See explanatory notes, if any, and SOURCE at end of table.

Appendix table 3-21.

S&E trained U.S. scientists and engineers in the labor force, by degree level, tenure status at four-year educational institutions, and age: 1997

Field of highest degree	S&E trained, total	Age									
		Under 25	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+
Tenured or tenure-track Ph.D. holders at four-year educational institutions											
All science & engineering	158,500	NA	600	8,900	18,700	25,600	26,100	28,700	26,000	14,600	9,300
Engineering	20,300	NA	100	1,600	3,200	3,200	2,500	3,100	3,100	2,500	1,000
Aerospace engineering	800	NA	NA	100	100	NA	200	100	300	NA	NA
Chemical engineering	1,800	NA	NA	100	300	300	100	300	200	400	NA
Civil engineering	2,900	NA	NA	200	500	500	200	500	600	100	300
Electrical engineering	5,500	NA	NA	400	700	1,000	600	900	700	900	300
Industrial engineering	1,200	NA	NA	100	200	300	100	100	200	NA	NA
Mechanical engineering	2,300	NA	NA	200	400	300	400	300	300	200	100
Other engineering	5,800	NA	100	400	900	700	1,000	900	800	800	200
Life sciences	46,600	NA	100	1,700	4,800	9,000	9,300	8,600	7,200	3,500	2,500
Agriculture	5,400	NA	NA	300	600	1,300	1,000	700	900	400	200
Biological sciences	40,100	NA	100	1,400	4,100	7,500	8,100	7,600	6,000	3,000	2,300
Health/medical	1,100	NA	NA	NA	100	200	200	200	300	100	NA
Math/computer sciences	15,700	NA	100	1,300	2,100	2,600	2,100	2,700	2,800	1,200	800
Computer sciences	2,700	NA	NA	400	700	700	500	300	NA	NA	NA
Mathematical sciences	13,000	NA	100	900	1,400	1,900	1,600	2,400	2,700	1,200	800
Physical sciences	23,200	NA	100	1,500	3,400	3,200	2,600	3,700	4,200	2,700	1,900
Chemistry	10,400	NA	NA	900	1,400	1,300	1,000	1,700	1,900	1,100	900
Geosciences	4,000	NA	NA	200	800	700	600	500	500	400	300
Physics/astronomy	8,500	NA	NA	300	1,100	1,000	900	1,400	1,800	1,100	700
Other physical sciences	300	NA	NA	NA	100	100	100	NA	NA	NA	NA
Social sciences	52,800	NA	200	2,800	5,200	7,600	9,700	10,700	8,800	4,700	3,100
Economics	9,700	NA	100	800	1,100	1,500	2,000	1,500	1,600	800	500
Political sciences	8,300	NA	100	500	700	1,300	1,200	1,900	1,300	700	600
Psychology	17,100	NA	NA	900	1,800	2,400	3,200	3,800	2,300	1,500	1,000
Sociology/anthropology	11,400	NA	NA	400	1,000	1,500	2,300	2,100	2,400	1,000	700
Other social sciences	6,300	NA	NA	200	600	900	1,100	1,300	1,300	600	300

NA = data not available

SOURCE: National Science Foundation, Division of Science Resources Studies (NSF/SRS), Scientists and Engineers Statistical Data System (SESTAT), 1997.

See figure 3-13 in Volume 1.

Appendix table 3-22.

Older S&E degreed individuals working full-time: 1997
(Percent)

Age	Highest degree		
	Bachelor's	Master's	Ph.D.
55	80.6	89.7	92.1
56	72.9	80.6	90.0
57	72.4	77.3	85.7
58	73.9	71.6	84.9
59	62.6	64.7	82.8
60	57.3	64.1	82.0
61	56.9	57.7	76.2
62	54.8	53.4	74.0
63	39.2	36.6	59.7
64	31.9	40.3	61.3
65	30.3	27.1	55.7
66	22.6	25.2	44.4
67	14.7	18.5	39.7
68	14.9	7.9	27.7
69	17.3	14.3	26.8
70	10.0	9.7	20.8

SOURCE: National Science Foundation, Division of Science Resources Studies (NSF/SRS), Scientists and Engineers Statistical Data System (SESTAT), 1997.

See figure 3-14 in Volume 1.

Appendix table 3-23.
Number of foreign-born S&E degree holders, by place of birth: 1997

Country of birth	Number
India	184,900
China	131,300
Philippines	92,800
Germany	84,100
United Kingdom	74,600
Canada	72,700
Taiwan	68,100
Korea	53,000
Iran	48,300
Vietnam	45,500
Former Soviet Union	39,500
Japan	37,700
Mexico	35,100
Cuba	29,000
Poland	22,800
Italy	18,100
Pakistan	17,600
Jamaica	16,000
France	15,200
Colombia	14,500
Egypt	14,400
Lebanon	14,200
Israel	12,900
Greece	11,700
Argentina	10,900
Turkey	9,900
Netherlands	9,800
Romania	9,300
Nigeria	9,200
Peru	9,200
Hungary	9,200
Brazil	9,000
Panama	8,200
Thailand	8,000
Venezuela	7,900
Malaysia	7,100
Indonesia	6,600
Equador	6,500
Czechoslovakia	6,400
Dominican Rep	6,400
Spain	5,900
South Africa	5,700
Haiti	5,700
Austria	5,400
Ireland	5,400
Yugoslavia	5,300
Bangladesh	5,200
Sweden	3,900
Chile	3,300
Other foreign place of birth	160,200

SOURCE: National Science Foundation, Division of Science Resources Studies (NSF/SRS), Scientists and Engineers Statistical Data System (SESTAT), 1997.

See figure 3-15 in Volume 1.

Appendix table 3-24
INS permanent visas issued, by S&E occupation (thousands)

Year	Total, all immigrant S&Es	Engineers	Natural scientists	Mathematical scientists, and computer specialists	Social scientists
1988	11.0	8.1	1.2	1.2	0.5
1989	11.8	8.7	1.2	1.5	0.4
1990	12.6	9.3	1.2	1.6	0.5
1991	14.1	10.5	1.3	1.7	0.6
1992	22.9	15.6	2.8	3.4	1.1
1993	23.6	14.5	3.9	4.2	1.0
1994	17.2	10.7	3.1	2.8	0.7
1995	14.1	9.0	2.4	2.1	0.6
1996	19.4	11.6	3.7	3.3	0.8
1997	17.1	10.3	3.5	2.6	0.7
1998	13.5	7.9	2.5	2.5	0.6

SOURCE: Immigration and Naturalization Service Administrative Records.

See figure 3-16 in Volume 1.

Appendix table 3-25

Scientists and engineers engaged in R&D, and per 10,000 labor force population, by country: 1979-97

Year	United States	Japan	Germany	France	United Kingdom	Italy	Canada
Thousands							
1979	614.5	291.2	116.9	72.9	NA	46.4	NA
1980	651.1	303.2	120.7	74.9	NA	47.0	NA
1981	683.2	311.0	124.7	85.5	127.0	52.1	40.5
1982	711.8	321.0	NA	90.1	128.0	56.7	44.1
1983	751.6	347.4	130.8	92.7	127.0	63.0	45.6
1984	NA	357.4	NA	98.2	129.0	62.0	48.7
1985	801.9	380.3	143.6	102.3	131.0	63.8	52.5
1986	NA	393.0	NA	105.0	134.0	67.8	56.0
1987	877.8	415.6	165.6	109.4	134.0	70.6	58.3
1988	NA	434.6	NA	115.2	137.0	74.8	60.6
1989	924.2	457.5	176.4	120.4	133.0	76.1	62.0
1990	NA	477.9	NA	123.9	133.0	77.9	65.8
1991	960.4	491.1	241.9	129.8	131.0	75.2	65.2
1992	NA	511.4	234.3	141.7	134.0	74.4	73.1
1993	962.7	526.5	229.8	145.9	140.0	74.4	76.6
1994	NA	541.0	NA	149.2	146.0	75.7	NA
1995	987.7	552.0	231.1	151.2	148.0	75.5	82.2
1996	NA	617.3	NA	154.8	146.0	76.4	80.5
1997	1,114.1	625.4	NA	NA	NA	NA	NA
Per 10,000 labor force							
1979	57.7	51.3	43.4	31.4	NA	20.8	NA
1980	60.0	53.1	44.3	32.1	NA	20.8	NA
1981	61.9	54.5	44.0	36.3	47.5	22.9	33.8
1982	63.6	55.6	NA	37.9	48.0	24.9	36.8
1983	66.4	59.0	45.7	39.1	47.7	27.3	37.4
1984	NA	60.3	NA	41.1	47.3	26.6	39.3
1985	68.4	63.9	49.7	42.8	47.3	27.1	41.7
1986	NA	65.3	NA	43.7	48.2	28.4	43.7
1987	72.2	68.8	56.4	45.4	47.9	29.4	44.6
1988	NA	70.5	NA	47.6	48.5	30.9	45.4
1989	73.6	73.0	59.2	49.6	46.8	31.4	45.6
1990	NA	74.9	NA	49.9	46.7	31.8	46.4
1991	75.7	75.5	61.5	51.8	46.3	30.6	47.1
1992	NA	77.7	59.3	56.4	46.9	30.2	50.2
1993	74.3	79.6	58.0	57.9	49.2	32.6	52.0
1994	NA	81.4	NA	58.8	51.3	33.3	NA
1995	74.7	82.8	58.5	59.6	52.1	32.5	53.6
1996	NA	92.0	NA	60.5	51.1	32.7	NA
1997	81.8	92.2	NA	NA	NA	NA	NA

NA = not available

SOURCE: Organisation for Economic Co-operation and Development, Main Statistics database (Paris: 1999)

See figures 3-17 and 3-18 in Volume 1.

Appendix table 3-26.
Science and engineering trained R&D workers: 1997
 (Percent)

Degree level	
Bachelor's	55.5
Master's	28.5
Professional	2.9
Doctorate	13.0
All Degree Levels	100.0
Field of highest degree	
Engineering	34.9
Life sciences	13.4
Math/computer sciences	11.6
Physical sciences	10.2
Social sciences	17.0
Non-S&E fields	13.0
All fields of degree	100.0

SOURCE: National Science Foundation, Division of Science Resources Studies (NSF/SRS), Scientists and Engineers Statistical Data System (SESTAT), 1997.

See figures 3-6 and 3-7 in Volume 1.

Appendix table 3-27.

Employed U.S. scientists and engineers, percent with Research and Development as a primary or secondary work activity, by degree level and field of highest degree: 1997

Field of highest degree	Employed S&Es, total	Year since degree							
		1-5 years	6-10 years	11-15 years	16-20 years	21-25 years	26-30 years	31-35 years	36+ years
All degree levels									
All science & engineering	30.8	35.4	35.2	32.8	29.3	24.0	25.9	26.3	25.6
Engineering	49.4	60.8	55.6	49.9	47.1	42.6	43.6	37.8	34.4
Aerospace engineering	45.3	59.6	54.0	40.0	38.9	25.2	45.7	—	—
Chemical engineering	55.7	66.3	68.3	48.2	52.1	52.6	55.4	41.7	45.2
Civil engineering	39.6	51.3	50.3	43.2	37.0	32.5	28.3	27.6	31.1
Electrical engineering	53.6	62.7	57.6	56.0	52.3	50.6	42.3	40.7	33.8
Industrial engineering	33.7	40.5	40.6	30.0	24.4	31.6	33.0	—	24.5
Mechanical engineering	57.2	67.8	61.0	59.8	58.3	51.2	54.1	45.5	39.1
Other engineering	45.0	62.1	49.6	41.3	44.7	35.6	46.8	29.0	29.8
Life Sciences	31.0	42.5	40.1	31.0	27.4	23.1	20.4	19.2	18.9
Agriculture	24.9	35.3	38.8	25.1	24.7	18.2	10.0	20.1	12.2
Biological sciences	33.1	44.5	41.4	33.1	29.2	25.5	22.4	18.3	22.3
Health/Medical	25.7	36.0	30.3	30.0	19.2	12.4	27.2	—	—
Computer math sciences	31.0	36.3	33.3	32.7	29.4	26.6	24.4	18.6	20.1
Computer sciences	34.9	39.3	35.1	34.2	29.7	31.8	23.8	—	—
Mathematical sciences	26.4	30.8	28.8	28.7	29.1	24.2	24.4	18.9	19.7
Physical sciences	46.0	56.9	50.6	42.7	47.6	39.2	39.3	43.0	38.8
Chemistry	47.3	62.7	54.8	43.8	50.8	40.0	37.2	38.7	37.0
Geosciences	39.0	50.7	43.3	32.1	36.5	33.7	33.4	54.7	36.9
Physics/astronomy	56.7	62.0	60.3	57.0	60.3	49.5	54.6	52.3	50.4
Other physical sciences	29.4	25.6	26.7	47.6	41.4	—	—	—	—
Social sciences	15.6	17.8	16.5	17.1	15.4	12.3	13.0	13.8	12.6
Economics	16.6	22.4	15.6	16.8	13.7	15.7	16.7	17.4	5.3
Political sciences	16.3	18.1	17.6	20.6	18.3	8.9	11.3	13.4	18.1
Psychology	14.4	15.4	14.2	13.3	14.3	12.9	16.3	15.2	12.7
Sociology/Anthropology	14.6	16.1	19.8	16.8	15.0	11.5	9.8	13.4	15.2
Other social sciences	18.9	23.9	19.6	26.4	18.3	13.5	11.0	8.2	15.4
Bachelor's									
All science & engineering	25.8	28.9	30.2	28.9	25.2	19.3	20.9	20.6	22.1
Engineering	45.1	56.0	52.4	46.6	43.6	38.2	39.9	32.8	32.7
Aerospace engineering	41.3	51.8	49.4	37.7	35.5	—	—	—	—
Chemical engineering	50.8	60.4	64.4	40.2	49.5	48.8	52.0	35.8	41.5
Civil engineering	36.1	47.8	47.2	42.1	33.7	27.1	25.3	19.0	30.0
Electrical engineering	48.7	56.6	53.9	52.0	50.5	46.0	37.0	35.4	29.4
Industrial engineering	29.7	36.7	34.4	26.2	18.2	—	—	—	—
Mechanical engineering	54.7	63.8	60.2	58.3	54.8	47.6	54.4	44.0	37.9
Other engineering	37.6	58.4	44.4	34.9	37.6	25.9	41.4	16.9	27.9
Life Sciences	23.2	35.4	30.6	19.9	20.9	17.0	13.2	9.7	13.5
Agriculture	18.2	27.6	27.8	18.7	19.7	13.1	4.2	—	10.7
Biological sciences	25.0	37.0	32.6	19.2	21.8	19.5	14.8	9.1	14.3
Health/Medical	20.6	32.8	—	28.7	17.3	6.6	—	—	—
Computer math sciences	27.8	30.8	31.8	31.1	25.6	23.9	20.7	15.6	13.8
Computer sciences	33.7	35.0	34.8	33.8	27.3	34.4	—	—	—
Mathematical sciences	21.2	24.2	24.6	23.2	23.7	19.5	19.3	15.7	13.5
Physical sciences	36.5	45.8	41.8	31.2	39.5	32.3	30.2	33.0	30.0
Chemistry	37.9	53.1	46.4	28.4	41.3	33.7	28.2	29.0	29.2
Geosciences	31.1	39.4	34.9	27.0	31.4	26.1	—	—	—
Physics/astronomy	47.0	48.5	50.2	39.6	51.4	44.8	52.7	—	—
Other physical sciences	25.7	20.4	—	—	—	—	—	—	—
Social sciences	12.9	14.7	13.6	14.9	13.1	9.5	10.6	11.4	10.1
Economics	12.1	17.1	12.0	12.5	9.6	9.0	11.4	14.1	4.4
Political sciences	14.1	15.6	15.6	18.1	16.6	7.0	9.1	10.1	13.4
Psychology	12.3	13.0	12.3	11.6	12.1	11.1	15.2	—	9.2
Sociology/Anthropology	11.4	12.4	13.6	12.7	12.0	9.6	7.9	11.7	—
Other social sciences	16.0	19.7	15.3	26.2	18.0	9.3	9.9	8.0	—

Appendix table 3-27.

Employed U.S. scientists and engineers, percent with Research and Development as a primary or secondary work activity, by degree level and field of highest degree: 1997

Field of highest degree	Employed S&Es, total	Year since degree							
		1–5 years	6–10 years	11–15 years	16–20 years	21–25 years	26–30 years	31–35 years	36+ years
Master's									
All science & engineering	37.1	47.6	40.5	35.4	31.9	29.1	29.3	36.0	37.1
Engineering	56.9	65.6	59.4	57.8	54.3	49.0	48.7	50.1	44.0
Aerospace engineering	48.4	69.0	62.0	—	—	—	—	—	—
Chemical engineering	66.3	79.4	72.9	77.1	—	—	—	—	—
Civil engineering	48.3	55.5	58.7	45.4	47.4	46.7	29.4	—	—
Electrical engineering	63.7	70.0	62.8	66.5	54.7	63.3	55.9	61.1	—
Industrial engineering	43.9	43.4	56.5	—	—	—	—	—	—
Mechanical engineering	65.0	77.3	60.3	64.3	74.4	62.2	51.3	—	—
Other engineering	49.3	59.4	49.3	48.0	49.9	40.2	48.3	—	—
Life Sciences	36.5	53.0	44.9	40.2	29.3	28.8	17.3	27.8	—
Agriculture	40.8	53.2	55.4	—	—	—	—	—	—
Biological sciences	35.5	56.2	39.8	44.5	30.0	26.4	17.1	—	—
Health/Medical	36.0	38.4	—	—	—	—	—	—	—
Computer math sciences	34.7	44.1	32.9	34.3	33.6	27.2	27.8	—	—
Computer sciences	35.7	45.0	33.4	34.1	33.7	26.8	—	—	—
Mathematical sciences	33.2	41.7	31.2	35.0	33.5	27.6	31.9	—	—
Physical sciences	48.0	66.3	48.2	46.7	46.6	33.3	36.3	51.9	53.9
Chemistry	49.9	69.4	54.8	48.6	—	38.2	—	—	—
Geosciences	43.4	63.2	45.2	33.6	39.7	—	—	—	—
Physics/astronomy	54.1	73.6	58.7	—	—	34.1	—	—	—
Other physical sciences	37.8	—	—	—	—	—	—	—	—
Social sciences	18.4	26.2	20.5	15.7	15.3	15.0	13.8	14.6	22.1
Economics	25.6	37.7	—	—	—	—	—	—	—
Political sciences	23.6	30.1	26.2	—	21.5	9.5	—	—	—
Psychology	13.9	19.2	14.0	11.2	13.5	12.6	11.9	—	—
Sociology/Anthropology	27.5	37.2	—	—	—	—	—	—	—
Other social sciences	21.8	33.9	23.5	—	12.2	—	—	—	—
Doctorate									
All science & engineering	64.6	72.4	69.4	64.0	61.4	57.6	57.6	62.1	61.7
Engineering	75.7	85.9	78.1	76.8	75.6	65.2	65.3	70.0	66.8
Aerospace engineering	85.4	90.3	91.6	—	—	—	—	—	—
Chemical engineering	75.3	91.3	84.5	77.6	70.6	71.3	62.6	—	—
Civil engineering	67.1	83.8	70.9	57.7	—	49.3	—	—	—
Electrical engineering	76.3	86.3	81.7	80.0	77.9	60.6	58.7	—	—
Industrial engineering	61.5	70.5	56.2	—	—	—	—	—	—
Mechanical engineering	80.1	89.2	82.6	86.7	—	77.8	—	—	—
Other engineering	76.4	84.1	74.5	78.8	77.6	70.4	67.3	—	—
Life Sciences	68.0	76.7	74.8	68.3	66.6	58.5	58.9	60.2	56.9
Agriculture	70.0	77.2	79.4	70.6	70.8	61.5	54.6	65.9	—
Biological engineering	67.9	76.9	74.0	67.9	65.7	58.9	59.9	58.9	56.7
Health/Medical	66.2	67.2	82.4	71.6	—	41.9	—	—	—
Computer math sciences	68.5	74.3	74.7	75.0	62.4	62.9	56.6	56.7	—
Computer sciences	71.8	76.6	73.6	68.1	—	—	—	—	—
Mathematical sciences	67.4	72.2	75.5	78.2	64.9	62.8	56.6	56.7	—
Physical sciences	73.7	83.1	79.2	79.1	73.4	66.3	61.7	68.8	72.5
Chemistry	72.3	87.1	77.3	77.4	74.5	62.3	58.4	62.3	68.8
Geosciences	76.6	82.0	77.3	77.8	66.9	74.8	72.1	89.1	—
Physics/astronomy	75.1	79.1	82.5	82.5	76.1	67.5	63.9	73.2	77.8
Other physical sciences	64.0	—	—	—	—	—	—	—	—
Social Sciences	46.4	51.4	48.0	43.7	42.8	45.3	45.1	48.9	42.9
Economics	68.4	86.0	78.8	70.8	58.8	58.9	54.6	—	—
Political sciences	52.3	59.9	59.1	60.5	44.9	50.4	39.3	—	—
Psychology	34.1	36.2	32.3	31.4	33.3	31.6	37.3	42.8	41.5
Sociology/Anthropology	60.4	67.6	68.7	55.2	52.4	61.4	62.0	—	—
Other social sciences	57.1	65.5	63.5	46.3	52.1	62.5	52.3	—	—

— Data not available

SOURCE: National Science Foundation, Division of Science Resources Studies (NSF/SRS), Scientists and Engineers Statistical Data System (SESTAT), 1997.

See figure 3-8 in Volume 1.

Appendix table 3-28.

Total science and engineering jobs: 1998 and projected 2008
(Numbers in thousands of jobs)

Occupation	1998	2008	Change
Total, all occupations	140,514	160,795	20,281
All science & engineering	3,809	5,747	1,937
Scientists	2,347	3,995	1,647
Life scientists	173	219	45
Agriculture and food scientists	21	24	2
Biological scientists	81	109	28
Conservation scientists and foresters	39	46	7
Medical scientists	31	39	8
All other life scientists	1	1	-
Computer, mathematical, and operations research occupations	1,653	3,182	1,529
Actuaries	16	17	1
Computer systems analysts, engineers, and scientists	1,530	3,052	1,522
Computer engineers and scientists	914	1,858	944
Computer engineers	299	622	323
Computer support specialists	429	869	439
Database administrators	87	155	67
All other computer scientists	97	212	115
System analysts	617	1,194	577
Statisticians	17	17	-
Mathematicians and all other mathematical scientists	14	13	(1)
Operations research analysis	76	83	7
Physical sciences	200	229	29
Atmospheric scientists	8	10	1
Chemists	96	110	13
Geologists, geophysicists, and oceanographers	44	51	7
Physicists and astronomers	18	18	-
All other physical scientists	33	41	8
Social scientists	321	365	44
Economists and marketing research analysts	70	83	13
Psychologists	166	185	19
Urban and regional planners	35	41	6
All other social scientists	50	56	6
Engineers	1,462	1,752	290
Aerospace engineers	53	58	5
Chemical engineers	48	53	5
Civil engineers	195	236	41
Electrical and electronics engineers	357	450	93
Industrial engineers, except safety engineers	126	142	16
Materials engineers	20	21	2
Mechanical engineers	220	256	36
Mining engineers, including mine safety engineers	4	4	(1)
Nuclear engineers	12	12	1
Petroleum engineers	12	12	-
All other engineers	415	509	94

- No change

() Decline

SOURCE: U.S. Bureau of Labor Statistics, Office of Employment Projections, "National Industry-Occupation Employment Projections 1998-2008" (Washington, DC: 1999).

See text table 3-20 in Volume 1.

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